Building Services News

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Building Services news

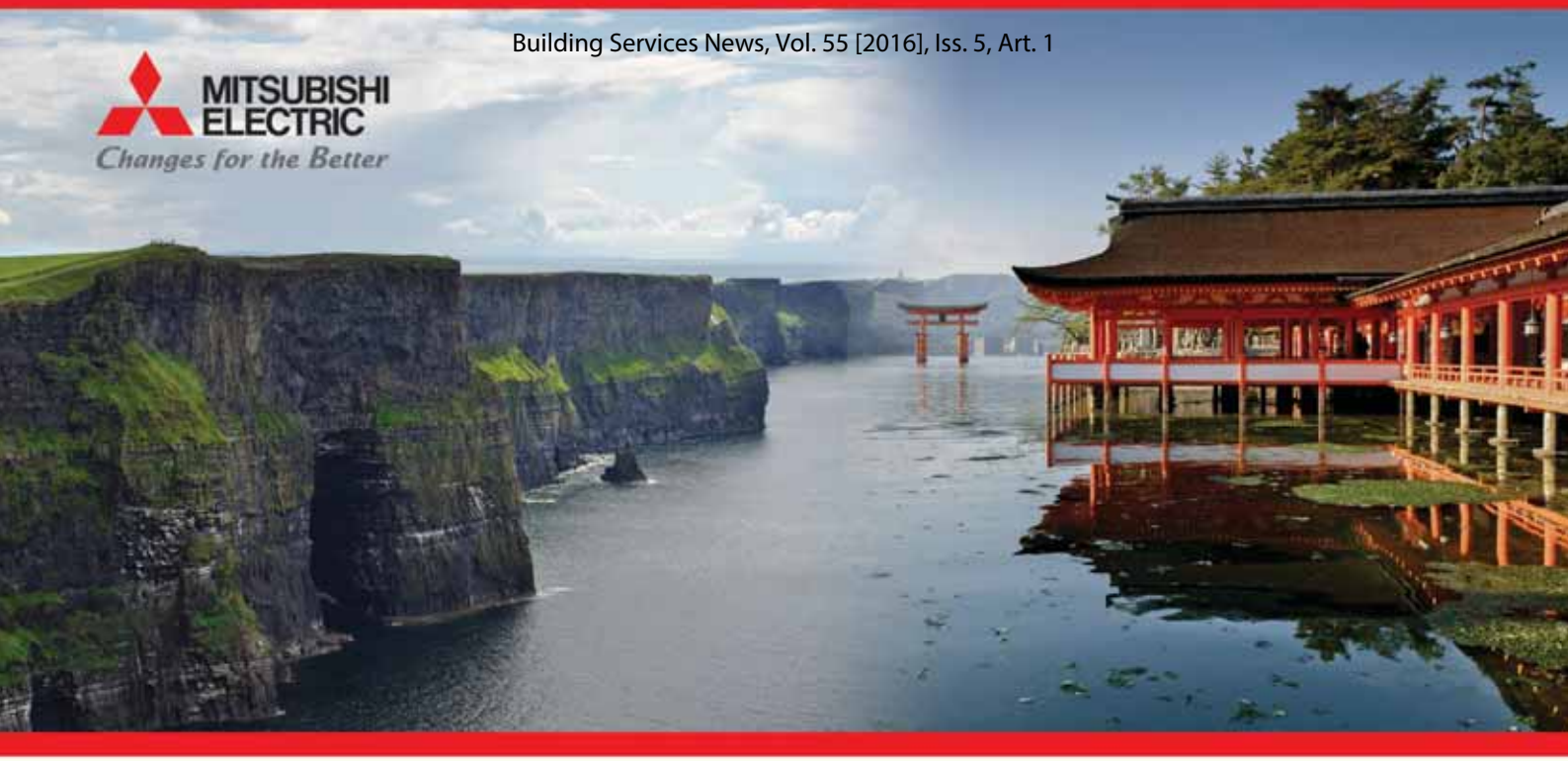
Industry supports LauraLynn

Another Side of … John Smith

RACGS at 'Augusta of Ireland'

COMMERCIAL BOILERS

The challenges surrounding the use of biomass and hydrogen in the future



Skill and expertise shortage bites

While the much-predicted skills shortage has come to pass, its impact is far more dramatic than expected, even at this early stage in the industry's recovery. Companies across all industry sectors are finding it increasingly difficult to get qualified personnel and this situation will get progressively worse as we go forward.

There are shortages at every level, from contracting and consulting right through to technical sales and after-sales service support. The implications are being felt in a number of ways.

Firstly, there is the actual shortage itself. Companies are understaffed and overworked. Then there is the impact on staff retention. For the first time in years employees have the upper hand and are able to move with ease. Finally, there is the impact on salaries. Whether to tempt new employees or retain existing employees, wage levels are increasing significantly.

If only tender prices reflected this new situation!

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NEWS AND PRODUCTS

Laura Lynn Hospice

As part of the Arup in the community initiative, Arup recently undertook professional design and construction services for a new parent's room extension at the Laura Lynn Childrens' Hospice in Dublin on a voluntary basis. This has now been completed and further works are currently underway to upgrade the ventilation system in the nurses' office and guest bedrooms.

Lindab and Vent Axia Ireland are generously donating two new heat recovery units, ducting and ancillaries to upgrade the systems, while Treysta Building Services are carrying out the installation of the units, again all on a voluntary basis.

Pictured at the Laura Lynn Childrens' Hospice site meeting in Dublin recently were Barry Murphy, Vent Axia with Damien Flynn, Arup; Trevor Hammond, LauraLynn; Des O'Brien, Lindab, and Kevin Kelly, Treysta.

Kevin Devine joins Xylem

Xylem has appointed Kevin Devine as Business Development Manager to spearhead and grow its business in the building services sector. Kevin is widely known and respected within the industry, having worked in various senior managerial roles with some of Ireland's market-leading companies.

In his new role Kevin will work closely with consulting engineers, mechanical contractors, renewable heating installers and other specifiers to develop tailored solutions for projects both big and small. He will bring his vast experience to bear to ensure that these solutions are engineering-led, cost-effective and energy-efficient, while at the same time delivering value for money and long-life cycle.

Contact: Kevin Devine, Business Development Manager, Xylem. Tel: 087- 757 7411; email: kevin.devine@xyleminc.com

Hevac appoints Devereux

The directors of Hevac, Tube Company, Polytherm and Origen are pleased to announce the appointment of Paul Devereux to Specification Sales Manager for the Group.

Paul has worked in the building services industry for over 10 years and has successfully managed the commercial and industrial division within the Hevac Group for the last three years.

Paul's new position is very much a cross-company role aimed at the Group's larger capital equipment for the specifying/consultant segment of the industry.

Contact: Paul Devereux, Hevac Group Specification Sales Manager. Tel: 086 – 173 8060; email: paul.devereux@hevac.ie

Panasonic strengthens Irish operation

Marc Overson, newly-appointed UK & Ireland Country Manager for Panasonic, visited Ireland recently to meet with consulting engineers, dealers and installers in the company of Vincent Mahony, National Account Manager, Panasonic Ireland.

Marc has extensive experience in building services, and the air movement sector in particular, having worked with many of the leading global market players in roles that took him all over Europe on a regular basis. He will now use the wealth of knowledge accumulated during that time to provide support to the Irish operation and the team headed up by Vincent.

Right: Marc Overson, UK & Ireland Country Manager for Panasonic pictured with Vincent Mahony, National Account Manager, Panasonic Ireland.

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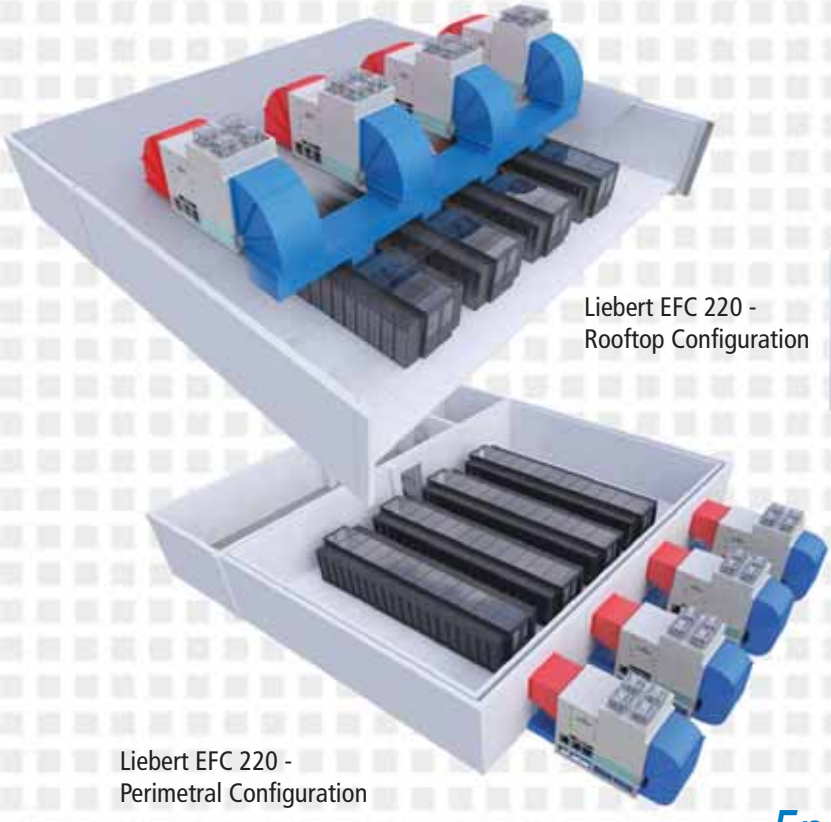

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NEWS AND PRODUCTS

CIBSE-approved CPD humidification seminar

Condair plc (formerly JS Humidifiers) is offering a free CIBSE-approved seminar on humidification and psychrometrics. Presented by Damien Power, Ireland Sales Manager for Condair, it enables HVAC consultants, contractors and end users to get up to speed on the latest in humidifier technology and gain CIBSE CPD points during a lunch break from the convenience of their own office.

The one-hour long seminar covers an overview of humidity control, explanation of psychrometric calculations, detailed analysis for all types of humidifiers with the pros and cons of each, and the best practice guide to humidifier selection.

The CIBSE accreditation means that the seminar's content has been independently verified to be unbiased, up-to-date and technically accurate.

To request further details or to book a seminar with lunch provided, call +353 (0)91 507 120 or visit www.condair.ie/cpd

Condair Group is the world's leading specialist in humidification and evaporative cooling, with energy efficient, hygienic and innovative technologies for commercial, industrial and heritage applications. Condair is represented in Ireland by Condair plc, which offers system design, manufacture, supply, installation, commissioning, maintenance and spares. Condair plc is the new name for JS Humidifiers following the organisation's rebranding in October 2014. You can find out more by visiting the company's website at www.condair.ie

Powrmatic Ireland appoints Healy

Powrmatic Ireland has appointed John Healy as Sales Engineer. John brings a wealth of experience in the building services industry and in his new role he will promote the SFL range of flue and chimney products, along with the Powrmatic range of warm air and AC products.

Contact: John Healy, Sales Engineer, Powrmatic Ireland. Tel: 087 – 237 2451; email; johnhealy@powrmatic.ie

BSRIA Indoor Air Quality Guide

BSRIA has released a new topic guide on Indoor Air Quality (IAQ). It is aimed at those looking for introductory information about indoor air quality including definition, history and prevalence. There is also information on types of contaminants and their exposure limits, as well as a useful site map. Commentary is provided by BSRIA's Asset Performance Team Leader, Blanca Beato-Arribas.

This guide provides a brief insight into the most common contaminants, both from indoor sources and external sources, and what the exposure limits to these contaminants are. It also provides a summary of the current legislation and a guide map of what contaminants to investigate.

The guide is now free to download from BSRIA topic guides.

Hitachi appoints Paul McGettigan

Paul McGettigan has been appointed Sales Support Engineer, Ireland at Hitachi Air Conditioning Europe SAS. He will be responsible for sales, technical support and commissioning support. Hitachi can also offer training at its Dublin office in the Bluebell Business Park, Dublin 12.

Paul is a fully-qualified air conditioning engineer with over 18 years' experience in the industry, in particular in service and repair. In addition, he has extensive knowledge of split systems, VRVs, close control units and chillers.

He has widespread experience of meeting clients' needs and requirements, from both the technical and commercial viewpoints, and is especially adept at resolving issues before they become major problems.

Contact: Paul McGettigan, Sales Support Engineer, Ireland, Hitachi Air Conditioning Europe SAS. Tel: 087 – 914 9703; email: paul.mcgettigan@jci-hitachi.com

NEWS AND PRODUCTS

Inventum invests in Joule Group

Dutch hot water and ventilation company Inventum has acquired a majority stake in Ballyfermot-based Joule Group for an undisclosed sum. Joule began manufacturing copper-vented hot water cylinders in 1970 and now makes and installs innovative, engineering-led, renewable heating and hot water systems. The company operates in both Ireland and the UK.

Joule's joint managing directors, Ian Barrett and Ronan Ginnell, said the deal would cement the company's position as a market leader in the plumbing and heating industry, and give it access to a "wealth of expertise and experience" that would take the group into the "next phase of its development".

"In only eight years Joule has achieved market leadership in Ireland and a strong and growing position in the UK. We look forward to supporting Joule's further development under the continuing leadership of Ian and Ronan," said Inventum Chief Executive Richard Verbree.

McGrattan & Kenny takes gold!

McGrattan & Kenny was named the best engineering company in Ireland for Quality Management Systems at the recent National Q Mark Awards. The company was established in 1968 and provides mechanical engineering services nationwide to the industrial and commercial sectors. It has a wealth of expertise, a 40-strong team of highly-skilled employees, and a reputation for completing projects on time and within budget.

Having received the award from Minister for Social Protection, Leo Varadkar TD, Eamon McGrattan said: "Winning the Q-Mark Business Excellence Award validates all of the years of work undertaken by the McGrattan & Kenny team in order to reach this point in our development. It also gives us another edge over our competition … imagine how good U2 would be with two Edges".

Irene Collins, Managing Director EIQA with Leo Varadkar, TD, Minister for Social Protection, Eamon McGrattan and Liz Carroll.

Heat Merchants appointments

Mark Walker has been appointed Sales Director of Heat Merchants. His role involves managing the 31-branch network, the team of Business Development Managers, and the Technical Services and After Sales teams.

Mark Walker

Pat Smith

Mark has over 20 years experience in the Travis Perkins Group. He began his career working in the yard and was promoted a number of times, having worked in positions including Branch Manager and Regional Director before becoming Sales Director for North England and Scotland.

Meanwhile, Pat Smith has been appointed National Technical Services Engineer. Pat has worked in both refrigeration and mechanical services for over 19 years and has considerable experience in planning, design, installation, commissioning and after sales services for the industry.

He has particular expertise in renewable energy solutions and is both RGI and F-Gas registered. As part of his role Pat will manage the After Sale Service provision, including the call support team and the nationwide network of service engineers.

Bruce Shaw becomes Linesight

Bruce Shaw has changed its name to Linesight as part of a global strategy to enhance the range of services it provides and to expand its strategic partnership relationships.

In spite of challenging times in the construction industry in recent years, the company has continued to grow and, in response to that success, now requires a name that can be owned in all markets. Linesight offers world-class service across multiple industry sectors including commercial, data centres, life sciences, high-tech industrial, hospitality, healthcare, education, residential and retail.

As part of the group's strategic plan Linesight has altered some of its employee titles and positions in some markets. In Ireland Peter McHale has been appointed Chairman, Ireland, Richard Joyce has been appointed Managing Director, Ireland and Ken Cribbin has been appointed Managing Director, Project Management.

NEWS AND PRODUCTS

Know where the energy is going with Belimo

The Belimo Energy Valve, which consists of a 2-way characterised control valve, volumetric flow metre, temperature sensors and an actuator with integrated logic, combines the five functions of measuring, controlling, balancing, shutting and energy monitoring into a single installation-friendly unit.

Energy consumption for heating and cooling is determined on a continuous basis and then saved on the web server integrated in the actuator. The measurement data remains saved for 13 months.

Unique functions such as the Delta-T manager or the possibility of direct power control provide clarity, increase efficiency and cut costs. It is ideal for retrofit applications where system data is no longer available.

There are low installation costs due to all-in-one rapid and simple installation, time savings through automatic permanent hydraulic balancing, and reduced operating costs through pressure independence and air-bubble tightness.

Contact: Paul O'Neill, Sales Manager Ireland, Belimo Automation UK Ltd. Tel: 0044 - 1932 260460; Mobile: 086 - 245 2032; email: paul.oneill@belimo.co.uk

S&P appoints Sandford

Pauline Sandford is now responsible for internal sales at S&P Ireland Ventilation Systems. Pauline has been involved in the building services sector since 1980 and has held a number of key positions with various companies over the years. She joined S&P in July of this year and her new position is effective immediately.

Contact: Pauline Sandford, S&P Ireland Ventilation Systems. Tel: 01 – 412 4020; email: psandford@solerpalau.com

INSTALLER TIPS

‘Simplifying’ pump installation

Working as an installer requires strict time management, which is why most installers appreciate manufacturers who take care to make products and solutions that simplify workflows.

Derek Elton, Sales Director, Wilo Ireland.

“That is why high-efficiency Wilo technologies are easy to install, saving time at the job site”, says Derek Elton, Sales Director, Wilo Ireland.

“The ‘simplifying’ Wilo HiMulti 3 offers high performance and fast, secure installation. Highly-efficient, secure and easy to install, at Wilo, that’s what we call going beyond pumps.

“The ‘simplifying’ series of the intelligent Wilo HiMulti 3 combines a range of highly-efficient technologies with tremendous operational safety. The series was developed for pumping and pressurising clean or slightly dirty water. The products are usable in homes, in farming and for irrigation, sprinkling rain water and well-water supply.

“The pump utilises impressive, specially-developed high-efficiency hydraulics and a two-pole motor with capacity ranging from 0.4 to 1.1kW, depending on the model. Thanks to its new, extremely-compact design, the multistage centrifugal pump requires very little space to install.

Wilo HiMulti Series 3 high-efficiency, fixed-speed, pump.

Easy installation, simple operation

“The ‘Wilo-Connector’ simplifies installation and minimises site workload, saving valuable time in the commissioning process. The Connector allows easy and tool-free electrical connection of the HiMulti 3 (“plug-and-pump” technology). The reduction in noise level is significant, while the new on/off switch enhances pump safety and makes maintenance easier. Additionally, improved access to the pump allows for easier filling and drainage”.

As one of the world’s leading manufacturers of pumps and pump systems for not only building services but the entire water management chain, Wilo has its eyes firmly fixed on the future and is heavily involved in research and development.

Based in Dortmund, it is increasingly moving away from being just a supplier of components to being a system supplier. It has over 60 subsidiaries around the world – including Wilo Ireland – and is currently investing over €100 million in a Smart Factory for this digital age at its headquarters in Dortmund, Germany.

Contact: Wilo Ireland.
Tel: 01 – 426 0000;
email: sales@wilo.ie; www.wilo.ie

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New Lowara ecocircXL and XLplus manufactured in-house by Xylem

The new ecocirc XL and XLplus range of single and twin-head, high-efficiency, circulators was designed from scratch by Xylem and is marketed under the Lowara brand. Available in cast iron or bronze for hot and cold water HVAC applications, this new range is manufactured by Xylem with quality assurance guaranteed in respect of materials used and processes employed.

The ecocirc XL is a highly efficient circulator that enhances commercial hydronics systems with superior quality and dependability. State-of-the-art hydraulics, advanced motor design, intelligent controls, and smart communication capabilities highlight expert engineering across a broad range of HVAC and plumbing applications..

"At Xylem we believe in products that do their job when expected", says Austin Kennedy, Xylem Sales Manager, Ireland & NI, "and that are easy to install, commission, operate and service. When it comes to circulators, that means high efficiency, robust design and high precision manufacturing, as well thought through controls and communication".

The ecocirc XL and XLplus are designed to deliver many years of trouble-free operation. Features and benefits include:

Low cost of operation – Operation costs are kept to a minimum thanks to a high-efficiency ECM motor and hydraulics;

Easy to operate – With only four logically-placed buttons, it's easy to set up and operate the new ecocirc XL. Its advanced settings can be accessed from a PC, tablet or smartphone via built-in communication BUS or Wi-Fi (optional module);

At Xylem we believe in products that do their job when expected

The new ecocirc XL and XLplus range of single and twin-head, high-efficiency, circulators from Xylem.

Lowara CAD Centre

Also new from Xylem is the Lowara CAD Centre where consultants can find 2D and 3D CAD drawings, as well as BIM models, for all of the company's water boosting and circulating pumps. This simplifies the work of specifiers who can now find the CAD files for most Lowara products in one place.

The CAD Centre is really user-friendly with icons for each product type that lead directly to the drawings. The CAD Centre also has a powerful search function that quickly narrows down "hit lists", so finding what you're looking for is quick and easy. The files can be either downloaded or shared via email directly from the CAD Centre with just one click.

Dry-run safety – The built-in dry-run protection stops the pump and prevents damage if it runs without water;

Flexibility – There are two analogue inputs for 4-20mA and 0-10V signals, and one temperature probe;

Chilled water no problems – The electronics are separated from the pump to prevent condensation problems when pumping chilled liquids.

Keep it hot – A moulded insulation shell keeps the temperature of the pumped liquid (and the surroundings) where it should be;

Visible in dark plant rooms – Clear display with large figures and symbols makes it easy to read the values.

Contact: Austin Kennedy, Sales Manager, Ireland and NI, Xylem. Tel: 01 – 452 4444; Mobile: 087 – 980 3423; email: Austin.kennedy@exleminc.com ■

ANOTHER SIDE OF …

John Smith … archer

John Smith, a building services engineer with John Sisk & Son, is a decorated archer who has represented Ireland with distinction at senior international tournaments throughout the world. At the peak of his career a couple of years ago – when he was still finishing his degree in DIT Bolton St – he was ranked 95th in the world.

John took up archery at the relatively late age of 17, after too many injuries playing rugby meant he had to find a less exertive sport. Introduced to it by a friend, he took to it with his customary all-or-nothing commitment, shooting anything up to 350/400 arrows a day in training at his peak.

There is a certain irony in the fact that archery is now taking a back seat to his career when it was his prowess at archery that saw him through his building services degree in DIT, right up to his Masters, on a sports scholarship.

Apart from the high of once being ranked among the top 100 archers worldwide, John has had some notable achievements over the last few years.

On the home front he is still the current national record holder for Full Fita (1380) and Double Fita (2746); for the 90mts (336/360); and the 50-metre, 15-arrow match play (146/150); he was Outdoor National Champion in 2012; Silver National Champion in 2013; and 2nd and 3rd respectively in the Irish Open and Irish Series in 2015.

There are also indoor tournaments and here again John performed with distinction. His successes include ISAA National Champion 2010-2015; ISSA Indoor National League 2011-2015; and 80/240 European Archery Festival 2014.

His international honours include coming 8th and 6th respectively in the Senior Euronations in 2010 and 2011; winning silver in both the mixed team and mens' team events at the European Grand Prix in Bulgaria in 2012; 9th in the World University Archery Championship in 2012 in Spain; and 17th in the Individual World University Games in Korea in 2015.

John has also coached and has acted as Junior Irish Compound Coach to Irish teams participating in various world championships and cups. In 2015 Lauren Gaynor won the Junior Ladies Compound World Cup Stage in Marakesh under his tutelage.

John says that archery is 10% physical and 90% mental. It is all about staying calm, keeping you breathing relaxed and your heart beat low. Not so easy when representing you country on the world stage, but its what has to be done as the slightest movement can have a major impact on success or otherwise.

As this illustrates, archery is a very technical sport and not at all like the romanticised, gung-ho adventure exemplified by innumerable Robin Hood movies. That said, John did have his own Robin Hood moment during a world qualification round in Poland when he perfectly speared an arrow already in the target as per the grand finale in many of these movies.

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* Amazon vouchers are awarded on completion of orders placed and delivered after Oct 1st and can be redeemed up to 60 days after equipment delivery. Amazon Vouchers are awarded on complete systems only at €10 per HP on all Hitachi VRF and Split systems. (i.e. SPLITS RCI 5.0 System = €50, VRF RAS 50 System = €500. All RAC Products = €10) To find out more, contact your Hitachi Sales representative.

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Marina Village features Panasonic Aquarea units

When first proposed in the mid-2000s, the regeneration of Greystones Marina was not universally welcomed. However, now that much of the work has been completed and the first phase of the housing development just gone on sale, virtually everyone has been won over.

A lynchpin of the project is the residential development of houses and apartments called Marina Village. Perfectly positioned alongside the marina, beaches and village centre, the development features 358 architecturally-designed A-rated homes, with all in the first phase incorporating Panasonic Aquarea heat pump systems as supplied by Heat Merchants.

Two model types are used in the scheme, the 9kW and 12kW units, depending on the size of the house. Both deliver hot water up to 65ºC while still maintaining high COPs with little or no thermal losses in low ambient conditions. All the outdoor units have been specially treated to withstand the salt-laden atmosphere given that they are located so close to the sea.

Bridgedale Homes was appointed to complete the housing and other public elements of the project with O'Mahony Pike acting as architects and Delap & Waller as mechanical and electrical engineers.

Exterior view of the Tuskar house style.

Not surprisingly for A-rated homes, the build quality, interior fit-out and décor is exceptional. Complementing that is the top-of-the-range heating and hot water system provided by the new Panasonic Aquarea air to water heat pumps. Utilising high-efficiency heat pump technology, these systems incorporate a 200lt tank and deliver perfect indoor comfort, whatever the weather conditions, and even at outdoor temperatures as low as -20 °C.

The Panasonic Aquarea 200lt cylinder installed in all four Marina Village house styles.

Aquarea models are designed to meet the new demand for low energy consumption housing, with high efficiency and low running costs. In fact, the entire Aquarea range is A++ rated at both 35ºC and 55ºC. All offer efficient control of room temperature based on the outdoor temperature, and indoor temperature, using Aquarea Manager.

"Aware of the importance of system outputs, energy saving, control and connectivity in offering the best comfort at the lowest price, we offer cutting-edge technology designed to deliver maximum performance", says Vincent Mahony, National Account Manager, Panasonic Ireland. "The new Aquarea heat pump systems epitomise this commitment and we anticipate more and more prestigious developments such as Marina Village opting for these going forward."

Contact: Vincent Mahony, National Account Manager, Panasonic Ireland. Tel: 087 – 969 4221; email: vincent.mahony@eu.panasonic.com

The Panasonic Aquarea outdoor unit in rear garden setting.

AFTER SALES SERVICE

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Panasonic BAXI FIREBIRD HEATING SOLUTIONS Solar PST SOLARWORLD REAL VALUE BOSCH Stelrad Kingspan

CELEBRATING 35 YEARS IN IRELAND

Mitsubishi Electric looks forward in looking back

This year Mitsubishi Electric marks its 35th year in Ireland, a major achievement for any company but especially so for one operating in a very competitive market that has experienced a number of "boom and bust" economic cycles over that time. Throughout it all Mitsubishi Electric has remained constant, providing support, continuity of service and leadership to its many trading partners throughout the country..

"In commemorating this auspicious occasion", says Ciaran Moody, General Manager, Mitsubishi Electric Ireland, "it is important to acknowledge the primary factors (apart from our product portfolio) that have contributed to that success – our own staff and that of our many loyal and dedicated customers. Together we share a vision and commitment that has resulted in a strong partnership that has seen the Mitsubishi Electric brand attain market-leading status across the various industry sectors we serve.

"Longevity of service is commonplace within Mitsubishi Electric and, equally so, we have some trading partners who have been with us from day one. While business-like and professional in all our dealings, we recognise the importance of personal relationships and so are flexible and responsive when situations arise that require support and understanding.

"This ethos is also reflected in our social and community responsibility programme. On a national scale we support a number of causes, perhaps most prominently the Make A Wish Foundation. On a local level – and primarily in conjunction our dealer network – we support all manner of initiatives, from charity fund-raising events to community projects and sports activities."

Looking to the future

On the product front Mitsubishi Electric is always looking to the future, pioneering new technological developments and incorporating them into products and systems that cater for current, and future, market requirements. This applies across the two primary company divisions – Living Environmental Systems (air conditioning, heating, etc) and Factory Automation.

As a global, leading green company, Mitsubisi Electric applies its technologies to contribute to society and daily life, sharing and promoting visions of a better living environment. In Ireland it leads the field with everything from innovative air conditioning and Ecodan domestic heat pumps to advanced robotics and automation products.

Challenged to create air conditioning and heating systems that provide exemplary performance, Mitsubishi Electric has developed amazingly-sophisticated, yet durable, solutions capable of delivering years of quiet peration, energy-efficient performance and minimum impact on the environment.

In the area of factory automation, it offers an extensive range of automation and processing technologies, including controllers, drive products, power distribution, visualisation and a vast line-up of robotics.

In marking its 35th anniversary, Mitsubishi Electric is anything but retrospective. While there is a definite celebratory tone to many of the activities, the emphasis at all events is forward-looking. They are being used to introduce new products and systems, along with fresh marketing, promotional and dealer-support campaigns.

In summary, Ciaran Moody says: "Rather than dwell too much on what we have achieved, the objective in celebrating this milestone is to capitalise on our success to create a better future for Mitsubishi Electric Ireland and our existing and potential customers." ■

Below: Ciaran Moody, General Manager, Mitsubishi Electric Ireland.

Implications of the Construction Contracts Act

Brian Quinn Bsc (Surv) PG Dip Const Law
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Brian is a quantity surveyor with extensive experience in the construction and commercial management of civil engineering and building projects. He is head of project management at Quigg Golden, a specialist company in the area of construction and procurement law based in Ireland and the UK.

In the last issue of *Building Services News* Brian Quinn of Quigg Golden wrote about the amendments to the Public Works Contracts and their potential impact on the building services industry. In this article he addresses the important issues those in the building services sector (and beyond) should be aware of in respect of the recent implementation of the Construction Contracts Act ("the Act").

The aim of the Act is to ensure the proper and prompt payment of all parties to construction contracts. However, the existence of the Act alone does not guarantee that construction firms will be paid in this manner. They will only benefit from the Act if they operate procedures set out in the Act (if relevant) in their contract properly. In order to do so, firms need to put procedures in place now to ensure they derive maximum benefit/ protection from the provisions of the Act.

When did the Act take effect?

The provisions of the Act apply to all construction contracts entered into after Monday, 25 July 2016. This includes main contracts, sub-contracts and sub-sub-contracts, and consultancy contracts.

What is a construction contract?

A contract is a construction contract for the purposes of the Act where a party is engaged:

(1) To carry out, or arrange for the carrying out, of construction operations; or
(2) Where a party is providing labour, or the labour of others, for the carrying out of construction operations.

Construction operations cover the vast majority of what we would ordinarily understand to be part of the construction industry, including work carried out by architects, engineers, project managers, other consultants, main contractors, sub-contractors and sub-sub-contractors. Notable exclusions include:

(1) Supply-only contracts (supply and fit contracts are included);
(2) Construction contracts that are of a value less than €10,000;
(3) Contracts relating to a dwelling, where the dwelling has a floor area less than 200sqm and if one of the parties to the contract is a person who occupies, or intends to occupy, the dwelling; and
(4) Public Private Partnership ("PPP") contracts.

Can I agree not to be covered by the Act?

Section 2(5)(b) prohibits parties to a construction contract from excluding or limiting the application of the Act. This means that, even if a contract specifically states that the Act does not apply, such a term will not be enforceable unless it fits within one of the exclusions set out above.

How does the Act affect payment provisions?

One of the key effects of the Act is to outlaw pay when paid provisions. Section 3(5) of the Act prevents contracts from containing a term that makes payment of, for example, a sub-contractor conditional on payment being received by the main contractor from the employer. In addition, Section 3 requires a construction contract to provide details as to the timing and quantification of amounts due under a contract.

Contracts must include either Payment Claim Dates for when amounts are due, or set out an adequate mechanism for determining those dates. A Payment Claim Date is defined in the Act as "the date when a payment claim in relation to an amount due under the construction contract is required to be made." The contract must also provide for the period between Payment Claim Dates.

To establish the amount to be paid on each Payment Claim Date, a construction contract must provide either the amount of each interim payment and the final payment, or outline an adequate mechanism for determining these amounts.

What if my contract does not contain these mechanisms?

The Act provides a Schedule ("the Schedule") that will apply to a construction contract if such mechanisms are not provided for. However, there is a distinction drawn between the use of this Schedule in a main contract and a sub-contract.

Under a sub-contract, the Schedule will always apply unless the payment

cycle agreed by the parties is more favourable to the sub-contractor than the Schedule. However, under a main contract, the Schedule will only apply if that contract does not make provision for how Payment Claim Dates and amounts are calculated. This means that payment terms less favourable to the main contractor than the Schedule can be agreed.

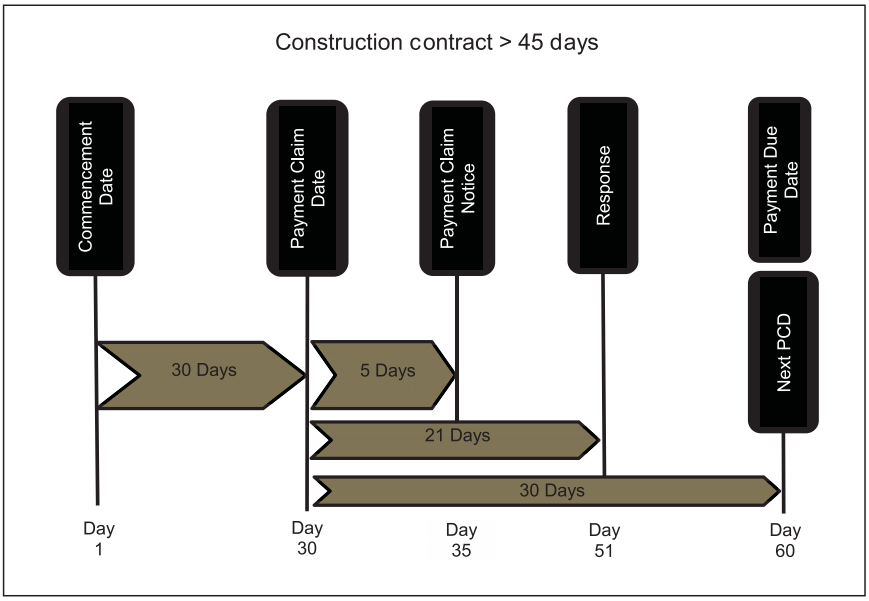
The Schedule provides for a 30-day payment cycle unless the total duration of the construction contract is estimated to be less than 45 consecutive days (in such circumstances the Payment Claim Date is 14 days after completion of the work under the construction contract). This 30-day payment cycle will apply to sub-contracts even in circumstances where a main contract has a different payment cycle.

How do the payment provisions operate?

Section 4 of the Act states that a party seeking payment under a construction contract will, not later than five days after the Payment Claim Date, provide to the other party a Payment Claim Notice specifying:

(1) The amount claimed (even if the amount is zero);
(2) The period and stage of work or activity to which the payment claim refers;
(3) The subject matter of the payment claim; and
(4) Basis of the calculation of the amount claimed.

Where a Payment Claim Notice is received and the other party disputes that the full amount claimed is due, then that party must, no later than 21 days after the Payment Claim Date, issue a response stating the amount proposed to be paid, the reason or reasons for the difference, and the basis on which the amount referred to is calculated. Unless a deal has been done in relation to the amount for payment prior to the amount becoming due, then the amount specified by the paying party must be paid on the date it becomes due. Both the Payment Claim Notice and response need to provide all the details set out above in order to provide the full benefits/protection of the Act.



Section 3 of the Act requires a construction contract to provide details as to the timing and quantification of amounts due under a contract.

How do I ensure compliance with and/or get maximum benefit from the Act?

The first step is to conduct a review of your standard payment procedures to check for compliance with the provisions of the Act. This should be a review that considers both arrangements with parties that pay you and parties you pay. In the context of these arrangements, you should develop *pro forma* "Payment Claim Notices" and "Responses", which will minimise the disruption and maximise the benefits to your business. These documents should reference your own contract terms and, more importantly, the Act.

What do I do if I am not paid?

Parties who have not been paid, without cause or for reasons they dispute, have two options under the Act to enforce payment. A party who has not been paid by the date the amount is due may suspend works after giving seven days' notice of that intention. However, issues exist with the wording of this provision and the ability of the paying party to prevent a suspension by the issuing of a notice of adjudication. This means it is more likely that enforcement via adjudication will be used.

Adjudication is a fast-track dispute resolution method that allows a "payment dispute" to be referred to an adjudicator for a decision 28 days after referral. It is not a process to be entered into underprepared but, in the right circumstances and if properly managed, it can be hugely beneficial to all parties.

This legislation is a positive and encouraging step forward for the Irish construction industry. If the Act can be embraced in the same manner as similar legislation has been in other jurisdictions, our industry should become a more equitable and efficient environment for all parties involved.

However, the question remains … will the Act be embraced? For that, we will have to wait and see. ■

This legislation is a positive and encouraging step forward for the Irish construction industry.

Boilers retain pole position

Gas and oil fired boilers continue to be the primary heat source for most commercial and industrial heating installations. Here *Ross Anderson, Director, ICOM Energy Association*, considers the reasons for this, and details the challenges surrounding the use of biomass and hydrogen in the future.

Over the last decade or so we have seen a marked increase in the choice of heat sources that are available for commercial heating installations. Indeed, considerable attention has been paid to low carbon sources such as biomass, solar thermal and heat pumps.

Nevertheless, gas and oil fired boilers continue to dominate the commercial heating market, while the low-carbon heat sources appear to have peaked and are now waning in popularity. This is because, in many cases, they have not met expectations nor delivered the anticipated return on investment. In the UK this has been compounded by reductions in subsidies for renewable heat sources.

Apart from the availability of government subsidies, other contributory factors range from over-hyped performance claims that lead to unrealistic expectations, through to systems that are not designed to take full advantage of these technologies. Systems that use a mix of heat sources require a different control strategy to those with single heat sources if the potential benefits of the low-carbon elements are to be fully leveraged.

There can also be issues when trying to retrofit low-carbon heat sources, as these typically perform better with lower flow and return water temperatures than are common in traditional boiler systems. In the latter case, the heat emitters in the system (radiators, fan coils etc) will be optimised for flow temperatures of around 80°C and lower flow temperatures will result is slower heat transfer to the heated spaces. Replacing all of the heat emitters in a building when upgrading central plant is rarely a commercially-viable solution.

In addition, while heat pumps still have some potential in smaller commercial applications they will only really deliver from an environmental standpoint when fuelled by "green" electricity. This is a situation that is currently far from reality.

For all of these reasons it's fair to assume that gas and oil boilers will continue to dominate the commercial heating sector for the foreseeable future. Also, modern pre-mix condensing boilers that are compliant with the latest ErP regulations are able to meet these requirements with a high level of efficiency. They are also easily retrofitted to existing distribution systems.

Moreover, with good turndown ratios they are able to maintain these high efficiencies across a wide range of heating loads. This is particularly important as the thermal performance of buildings improves so that set-point temperatures are reached more quickly, and the heating system spends more time operating at part-load.

Improved thermal performance of buildings does have implications for the capacity of commercial boilers that may be installed in the future, however, and the regulatory requirements that accompany smaller boilers. ErP Lot 1, which encompasses most commercial boilers, currently requires that boilers with capacities between 70kW and 400kW need to include information in the technical fiche; they do not, however, need to comply with the more onerous labelling aspects of the regulations.

As the heat loads of commercial buildings are reduced, this will result in the use of more sub-70kW boilers in these applications, all of which will have to comply with Ecolabelling requirements.

Regulatory requirements

Last year in *Building Services News* we provided an update on the ErP regulations that affect the commercial heating sector. Since then, most of the ErP Lots have been introduced and implemented, as well as the Gas Appliance Regulations and the Medium Combustion Plant Directive (MCPD).

At the time, we noted that there was still some uncertainty relating

to the gap between the gas and oil boilers up to 400kW covered by ErP Lot 1 and the 1MW boilers covered by the MCPD. This uncertainty still exists but is due to be reviewed in 2018.

That doesn't mean that everything is "done and dusted" though, as there are a number of other new regulations in the pipeline.

For example, after a lot of work the new natural gas standard EN16726 has been approved, although it was not completed because the EC (European Commission) agreed to accept the standard without one of the main criteria. It was not possible to get agreement on the range of the WI (Wobbe Index) which is used to compare the combustion energy output of different composition fuel gases in an appliance. Member states of Europe have varying WI and it would be a problem for many of them if a range of WI was mandated which could possibly give rise to safety issues.

On top of the problem of having an incomplete standard, the EC wants to incorporate it in the legal framework using the Network Code on Interoperability. It sounds complicated and it has instigated many discussions. Currently nothing is agreed, so the industry waits to respond to the next move.

Hydrogen

Another "burning issue" is that of hydrogen. There have been many conferences, meetings and working groups that discussed the future use of hydrogen. There is also a lot of interest in this at government level as a potential answer to reducing greenhouse gas emissions. This is particularly pertinent while heat pumps continue to use electricity generated from burning fossil fuels.

A significant advantage of switching to hydrogen is that we would continue to use familiar combustion technology, albeit with a necessity to modify or replace most appliances. Clearly this would be a major undertaking on a similar scale to the conversion from town gas to natural gas.

There is also a question mark over how the carbon dioxide generated in the manufacture of hydrogen gas would be captured and stored.

Bio-methane

Another area of uncertainty is bio-methane (biogas) and the relevant standard – EN 16723-1 – covering injection into the grid, which has now gone through the final vote and is awaiting publication. One of the key issues is the presence of the silicone polymer siloxane in waste water supplies, derived from a wide range of cosmetics and other products.

While most siloxanes decompose, some find their way into wastewater and become a component in sewage sludge. Here, the high temperatures produced during anaerobic digestion cause the siloxanes to volatise and become an unwanted constituent of the resulting bio-methane. If these are not removed from the gas, then once in the combustion process they will coat the electrodes and heat exchangers with silica deposits, drastically reducing their operation and efficiency.

As yet, it is unclear how big a potential problem siloxanes may become, but as the current practice is to mix bio-methane with natural gas, there is considerable dilution of the siloxanes.

So, while we have tackled the challenges imposed by changes in the Ecodesign and other regulations, we now need to be aware of further significant changes that are coming our way. ICOM and its members will be working closely with the relevant regulatory bodies throughout Europe to assess the potential impact of these and will advise accordingly. ■

A significant advantage of switching to hydrogen is that we would continue to use familiar combustion technology, albeit with a necessity to modify or replace most appliances.

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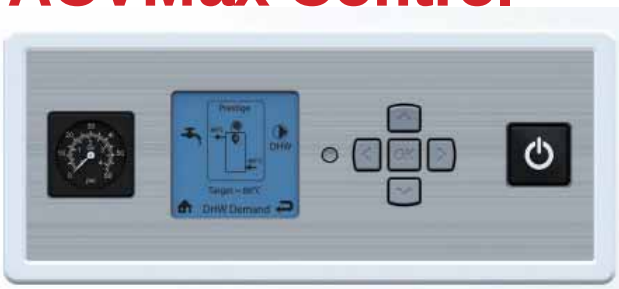

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... German engineering excellence for commercial projects

Wolf GmbH, one of the world's leading suppliers of ventilation and heating technology, has a dedicated office in Ireland with a strong team headed up by Sales Director Niall Horgan and Technical Sales Manager (Ireland & UK) Peter O'Brien.

Over the years Wolf's rapid progress, based on its German engineering excellence, has led to its emergence as a total systems supplier combining five sectors – heating, ventilation, air conditioning, solar and combined heat and power plants. They are installed across all building types.

Wolf has many prestigious commercial installations throughout Ireland and here we profile two recently-completed projects.

Wolf factory in Mainburg, Bavaria.

Project 1:

Celbridge Community School

Location: Celbridge, Co Kildare
Mechanical Contractor: Ashten Engineering
Boilers: Two Wolf CGB 100kW units

Wolf GmbH has provided two CGB 100kW wall hung gas condensing boilers to the new Celbridge Community School in Kildare. This school comprises a new building with a maximum capacity for 450 students. It has 17 state-of-the-art classrooms, including science rooms with working stations, four offices and a staff room.

Michael Ashe, Director of Ashten Engineering, carried out the full mechanical installation on the school. Michael commented: "The schedule was tight and we needed everything up and running before the new school term started. We chose Wolf for a number of reasons – the lead time on the boilers was quick; they have a good modulation range, meaning less burner starts therefore increased boiler life; they are high-efficiency and are made in Germany."

Michael added: "Whenever we wanted to check a technical aspect relating to the boilers or controls, Peter O'Brien, Technical Sales Manager for Wolf (Ireland & UK) was on the phone or on site straight away. We are delighted with the new boilers. As well as being very reliable they are also very easy to install."

The Wolf CGB wall hung condensing boilers are available in 50kW, 75kW and 100kW Outputs. These models offer extremely high efficiencies, up to 109% at 30% part load. They also have a maximum permissible flow temperature of 90°C, meaning they can satisfy almost any design criteria.


Plant room side view at Celbridge Community School showing the two Wolf CGB 100KW units.

www.wolf.eu

Smartset app for perfect control

In connection with the ISM7i interface module and a smartphone, the Wolf Smartset app allows users to conveniently operate their heating systems no matter where they are. An internet connection will only be made if permitted by the user.

Full access to the selected heating system is possible from the contractor level. The associated operating conditions are shown. Adjustments can be made and parameters called up and modified.

Project 2:

Portmarnock Sports & Leisure Centre

Location: Portmarnock, Co Dublin
Mechanical Contractor: Quinn Downes
Boilers: Two Wolf MGK-2 550kW units

Wolf GmbH supplied two MGK-2 550kW floor standing gas condensing boilers to Portmarnock Sports and Leisure Centre in Dublin, which are now delivering high efficiency, low cost heating. This centre boasts some fantastic facilities including a 25m indoor heated swimming pool; indoor courts; state-of-the-art gym; outdoor all-weather tennis courts; studios; and function rooms.

Prior to the installation of the new Wolf MGK-2 boilers, the centre was heated by two standard efficiency boilers that were over 35 years old. They had to run at full capacity to try and meet the full heat demand and this led to high energy use and therefore increased running costs. The units also required continuous maintenance. Hence the decision to upgrade.

David Dempsey, Contracts Manager at Quinn Downes, oversaw the project. The new boiler installation was scheduled to coincide with a complete plantroom fit-out and refurbishment work to the pool so the timeframe was tight.

David commented: "The MGK-2 boilers were delivered on a pallet and due to their compact size, were easy to manoeuvre into the plantroom and onto the existing plinths. As they take up considerably less space than the old boilers, there is more space within the plantroom, making access and maintenance considerably easier."

The MGK-2 range has been designed for commercial applications. Models are compact in dimensions and the whole range can fit through a standard 800mm door. Available in 130, 170, 210, 250, 300, 390, 470, 550, 630KW outputs, all the MGK-2 models offer extremely low NOx levels and a wide modulation range of 17-100%. Next year the range will go up to 1000KW. All models can be controlled via a smart phone, laptop or PC (see story above).

Angle view from above of the two boilers in situ.

WOLF

Energy saving and environmental protection as standard

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Joule's SmarTherm represents engineered solutions

Darren Sweeney, Specification and Commercial Manager, Joule.

Darren Sweeney is a mechanical engineer with an MSc in Energy Management and has six years industry experience. He has taken on the role of Specification and Commercial Manager with Joule, focusing on launching and developing its new, highly-specified, commercial product range under the label SmarTherm.

Darren will deal directly with engineering consultants and contractors to aid system design and product suitability. Day to day he is taking a hands-on approach with product development and commercial system design, while developing a commercial network by providing accredited continuing professional development (CPD) presentations.

The SmarTherm brand is Joule's new highly-engineered commercial range

Joule has been involved in manufacturing cylinders for more than 30 years and over this time has seen many developments in the manufacturing processes. It operates one of the most advanced production facilities in the sector, supplying cylinders, buffer tanks, heat pumps, heat interface units (HIUs), solar thermal/PV and underfloor heating into the Irish and UK markets.

To date Joule has focused on the residential and domestic sector, steadily increasing its market share year on year. Client demand for a highly-specified and efficient product is what drives Joule's continued focus on maintaining industry-leading standards.

The growth in the construction sector is welcomed and current legislative requirements increase customer need for a highly-specified product. Both contractors and consulting engineers are determined to provide reliable system components and designs.

Developers are more aware of system requisites and, although cost is still a driver, reliability and proven performance are key. Due to this awareness Darren sees huge potential in developing a reliable commercial brand built on the current success of Joule.

The SmarTherm brand is Joule's new highly-engineered commercial range. Here too the emphasis is on reliability, longevity and performance with a view to achieving market-leading status. The products are designed to exceed current market standards and can be tailored to meet client and project-specific requirements.

Supporting the development of the SmarTherm brand is a dedicated in-house design team made up of fully-qualified and experienced building services engineers, and a team of field engineers to provide site support and system commissioning. Both Darren and these engineers liaise closely with clients and consultants, using their experience to ensure a suitable system design is achieved to meet customer and legislative requirements. All designs are covered by professional indemnity insurance.

SmarTherm heat interface units (HIU) are typically installed in large apartment complexes with multiple dwellings. Rather than each dwelling being fitted with a boiler, a central boiler provides heating and domestic hot water energy to the entire complex. Heat interface units (HIU) act as a bridge between the central boiler and the heating and hot water systems of the individual apartments.

Contact: Darren Sweeney, Specification & Commercial Manager, Joule.
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email: darren@joule.ie; designie@smartherm-ch.com ■

Benefits of Modular Design

Modular boilers are designed as an alternative to large single boilers and offer a very efficient approach to commercial heating. Each module can be a separate boiler installed alongside another in a horizontal arrangement, or as a vertical stack of boiler modules one above another. They provide a flexible and secure approach to heating solutions, with each boiler module providing a percentage of the total system load.

Smaller modular boilers are physically easier to transport and handle than very large boilers. For retrofit projects they can be installed alongside the existing boiler as they are capable of high outputs from a compact size. Indeed, Hamworthy's Wessex Modumax condensing boiler range can provide more than 762kW in less than 1sqm of floor space. In the event of a module breakdown the building can still be heated sufficiently by the other boilers in the system.

All Hamworthy modular boiler ranges have lightweight designs and will fit through a single doorway, making them ideal for roof-top or basement plant rooms and high-rise residential buildings

The servicing is also more convenient as access is easy and one module can be serviced while the others continue to meet the system demand.

In addition, sequence controllers mean the boilers modulate together to match the load. This maintains very high system operating efficiency.

Hamworthy

Wessex ModuMax MK3

Wessex ModuMax MK3 is a compact floor-standing boiler range that offers the choice of high-efficiency condensing models, all with a 10 bar pressure rating. They feature the latest fully-modulating burner technology with 100% to 20% modulation on each module, and hot surface ignition with 120v power transformer.

Models are available in individual boiler condensing modules of 97kW, 116kW, 147kW, 196kW and 254kW and in a choice of one, two or three module high stacks giving 15 combinations of like-powered modules. The heat exchanger is manufactured in high grade stainless steel to provide protection against condensate, and each module is designed to operate continuously at up to 40ºC delta T differential temperature rise across the module. This is backed by a 10-year warranty.

All feature modern controls and use LPB (Local Process Bus) communication system and can be integrated with BMS systems. There is also a range of optional manifold kits.

Purewell VariHeat

Purewell VariHeat is a cast iron, condensing, fully-modulating, pre-mix gas fired commercial boiler that is supplied with a 10-year heat exchanger warranty. Non complicated design means it is easy to operate and maintain. It also reduces carbon emissions and saves the end-user money on fuel bills.

Factory-tested before delivery, it sits on the same footprint as many traditional and atmospheric boilers, thereby reducing space concerns.

Purewell VariHeat offers easy access to plant rooms as it fits through a standard doorway but can also be supplied un-assembled for plant rooms with difficult access. This makes it the perfect choice when replacing old atmospheric boilers.

The Purewell VariHeat cast iron boiler has ultra-low emissions and durability built in as standard. At 25mg/kWh NOx emissions, it easily achieves European Class 5 performance.

The robust cast iron heat exchanger is fitted with a down-firing pre-mix burner and achieves seasonal efficiencies up to 96% gross, exceeding the minimum seasonal efficiency requirements of 84% gross for new and existing buildings.

Boiler controls are functional and simple to use, and accommodate stand-alone operation or fully integrated control with BMS compatibility. There is an optional cascade controller for multiple boilers and a range of pipe kits for two, three or four multiple boilers.

Muirfield Drive, Naas Road, Dublin 12. T: 01 – 419 1919.
email: info@hevac.ie

Unit 1, Furry Park Industrial Estate, Dublin 9. T: 01 – 842 7037.
www.hevac.ie

South Ring West Business Park, Tramore Road, Cork. T: 021 – 432 1066.

Stratton mk2

The new Stratton mk2 wall hung condensing boiler has a highly-durable stainless steel heat exchanger and is suitable for use with natural gas and LPG.

The range of six models, with outputs from 40kW to 120kW, makes it easy to match a boiler to meet the building heat load. A 5:1 turndown ratio per boiler module means any changes in system load are accurately matched.

Designed for sealed and pressurised systems only, the hydraulic installation can be fast tracked using factory-manufactured frame and header kits that include boiler pumps for up to four boilers. Efficiency in excess of 108% nett keeps operating costs to a minimum, and the pre-mix burner technology gives clean operation with ErP Class 6 NOx emissions.

The Stratton mk2 is suitable for room-sealed and open-flue arrangements. Pre-defined flue headers for up to four boilers, plus off-the-shelf flue solutions for single boilers, help simplify installation.

CIBSE-accredited CPD

Hevac's CIBSE-accredited Hamworthy CPD presentation looks at the practicalities of how to save energy in commercial heating and hot water projects, and then quantifies those savings from the whole-life perspective.

It explores real energy saving examples, comparing the total life costs of modular condensing boilers over traditional atmospheric and steel shell boilers. It also looks at the latest EU legislation concerning commercial boilers, and the implications of additional changes currently being considered.

BOILERS COSMOGAS®

Cosmogas AGUAdens

Available in a range of models with 16, 22 and 37lt capacities and respectively with 27.5kW, 37.6kW and 64.8kW outputs, the AGUAdens Cosmogas from Hevac is a new wall-hung water heater range designed to deliver instantaneous hot water for houses, offices, sports facilities, shopping centres and large-sized spaces in general.

Compact and light, AGUAdens simplifies installation while the simple and intuitive commands make for easy use. Maintenance is also simple, thanks to the water heater's front panel.

Features and benefits include:

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- Low CO 15ppm;
- Fully condensing;
- Fully modulating with efficiency up to 109%;
- 316 T1 (titanium) stainless steel heat exchanger;
- Working pressure up to 11 bar;
- Outdoor IP65 casing available.

AGUAdens T Series

AGUAdens 60T and AGUAdens 70T are floor-standing condensing water heaters that can be installed easily thanks to their power, reduced size and lightness, freeing space inside mechanical rooms. Turndown ratio is up to 1:4;

AGUAdens 100T, AGUAdens 115T and AGUAdens 140T are condensing water heaters that can be installed directly on the floor thanks to their power, reduced size and lightness. They are equipped with two RVC heat exchangers made of AISI 316 Ti (titanium) stainless steel that work in cascade mode with unit power at 99kW, 115kW and 140kW. Turndown ratio is up to 1:10;

AGUAdens 180T, AGUAdens 210T and AGUAdens 280T are condensing water heaters that can be installed directly on the floor thanks to their power, reduced size and lightness, freeing space inside mechanical rooms. They are equipped with three or four RVC heat exchangers made of AISI 316 Ti (titanium) stainless steel that work in cascade mode with unit power up to 280kW. Turndown ratio is up to 1:20.

How to choose the correct boiler

There is a wide variety of light commercial boilers on the market, and understandably it can be difficult for heating engineers to make a decision between them. Here Paul Clancy, Managing Director, Baxi Potterton Myson, talks through the main points to consider.

When selecting a boiler for a light commercial application such as a small shop, an office or a health clinic, heating engineers are faced with a wide range of products on offer. While the initial cost of a boiler will always play a part in the decision-making process, basing the choice purely on the purchase price may prove to be a false economy. Therefore, it's important to consider several other factors as well.

Today, energy efficiency has to be a main consideration and, as a result of the Energy Labelling Directive (widely referred to as ErP), it is now easier to select the most energy efficient products. It is also important to use supplementary details such as specific energy-efficiency data – this can help to differentiate between products that have the same energy label rating. Additional performance and efficiency parameters can be found in the "technical fiche" and within product data/technical parameter sheets.

Manufacturers' whole-life costing models comprising an analysis of the costs associated with a specific product over its lifetime can also be used to predict how much energy a boiler will use and cost to run (depending on fuel prices). Some energy-efficient equipment may have a slightly higher capital cost but this can often be recouped very quickly as a result of lower energy use.

Assessing a product's anticipated energy use over its lifetime also reveals how much carbon it will emit. Today, combatting climate change is more important than ever and, with the fifth carbon budget and the Paris Agreement in mind, carbon emissions from commercial buildings must be kept low.

Potterton Sirius Two WH wall-hung boiler.

Installation and maintenance

It's also important to consider the costs and time associated with installation, maintenance, repairs and servicing. Heating engineers will understandably want to choose a product that's quick and easy to install, as well as being simple to maintain (as they are likely to be called back for service work).

The Sirius two WH boilers from Potterton Commercial, for example, are compact in size and lightweight, making them very easy to install. The 50kW and 60kW models are in fact comparable with domestic boilers. Boiler frames and cascades simplify the installation process further. Accessibility and the tools and equipment required for maintenance and servicing are also worth some thought.

Unplanned, unexpected repairs must also be considered. A boiler manufactured from high-quality components and materials may initially cost more to purchase, but it will require fewer spare parts and repairs, contributing to a shorter payback period and less disruption and downtime. Spare parts availability is equally important. Manufacturers with a dedicated parts division can provide genuine spares more quickly, and offer technical support and advice.

Warranties

Warranties are another important area, with lengthy warranties giving the end-user peace of mind. On certain products, and if certain terms and conditions are met, Potterton Commercial offers a five-year warranty. Longer warranties can be dependent on whether the manufacturer has commissioned the boiler.

Technical support

Another thing to consider is the amount of technical support that's provided by the manufacturer, both pre-and post-sale. Some manufacturers have dedicated technical teams on hand. We can, for example, provide help during the initial planning stages through to installation and aftersales. We can also provide training to ensure heating engineers have the skills they need to install and maintain our products.

Finally, no matter what boiler is chosen, it is essential to include chemical water treatment, while heating engineers should also recommend that carbon monoxide (CO) alarms are fitted. Awareness about the dangers of CO in the home is growing, but it's important to remember that the risks equally apply to business premises. ■

Vokèra

Commercial Applications

Vokèra offers a range of commercial applications from light commercial gas boilers, such as the Verve, to products suitable for large cascade installations, such as the CondexaPRO Box products. With over 20 years experience in commercial hot water and space heating, Vokèra is able to provide the product and the knowledge to ensure a reliable and successful installation. Our experienced Pre Sales team can support each project from start to finish so you can trust Vokèra to provide the complete and correct high power system for you, including:

- Solutions from 50kW to 6.9MW
- Numerous cascade configurations
- Standalone controls and / or BMS integration
- Internal and external applications
- Full Pre Sales and design service

ErP COMPLIANT

For more information visit **www.vokera.ie/commercial**

Euro Gas unveils the new Remeha Quinta Ace 160

Euro Gas has announced the arrival to the Irish marketplace of the new Quinta Ace 160, one of Europe's biggest-output wall hung boilers and one of the most advanced boilers in its class.

Based on proven Quinta Pro technology from Remeha, the new Quinta Ace delivers ultra-reliable performance and outstanding efficiencies of up to 99% GCV. With an individual output from 34.6kW to 161.4kW and compact dimensions, Remeha's new Quinta Ace 160 offers an unrivalled output to physical size ratio.

The Quinta Ace 160 can be installed alone or in a cascade with additional options to mix with Quinta Pro boilers for more flexible design. Its small footprint and multiple flueing capabilities make it exceptionally easy to install in either new or existing buildings.

The state-of-the-art human machine interface (HMI) on the next generation control offers clearer, more detailed information for more flexible, efficient operation. Finally, a one-piece cast aluminium heat exchanger ensures reliable, high performance.

With plant room space at a premium, the ability to move large outputs off the floor and on to the wall makes the overall design process easier. Benefits include:

- New cast aluminium heat exchanger for improved performance and efficiency;
- New "human machine interface" gives the customer great flexibility in terms of external management;
- Suitable for use on sealed systems and open-vented installations;
- Ideal for use in both new and retrofit installations;
- Class-leading power output to physical size ratio;
- Fully modulating;
- Quiet operation <52dBA;
- Plant room space reduction;
- Easy access through doors and lifts;
- Can connect to any BMS without additional parts needed;
- Dry side can be examined and descaled. Cleaning tool and gaskets supplied;
- Future-proof for emissions regulation;
- In-built non-return valve between valve and burner;
- LED illuminated internal light;
- Data file for storing fault/run ;
- Automatic maintenance warning;
- PC connection;
- ErP compliant;
- Relay kit (optional);
- Premix burner;
- Cascade up to eight boilers in-line or back-to-back;
- Multiple flueing capabilities

Contact: Euro Gas.
Tel: 01 – 286 8244;
mail: sales@eurogas.ie

Output capabilities

Single boiler output
34.6kW to 161.5kW

Cascade output
Up to 1292kW

Maximum gross efficiency
Up to 99% GCV

Commercial Energy Saving Credits

Heat Merchants have extended their Energy Saving Credit Schemes to include upgrades to gas and oil heating plant in commercial properties. The scheme, which is administered in conjunction with Bord Gáis Energy, encourages installers and business owners to save energy and reduce fuel costs while also qualifying for substantial funding and tax incentives.

Depending on selected and existing conditions, the benefits of upgrading includes credit of up to 15% on boiler capital costs, up to a 20% reduction on annual heating bills, and a return on capital invested in less than three years. Boiler upgrades in commercial properties also quality for Accelerated Capital Allowance (ACA).

The scheme encourages installers and business owners to save energy and reduce fuel costs

Heat Merchants supplies market-leading commercial gas and oil boilers from Firebird, Bosch Commercial and Baxi-Potteron and its Technical Services Team delivers a full system design, including a site survey, expert advice, equipment specification and commissioning.

For more details contact the Heat Merchants Commercial Heating Team on Tel: 01- 8414800. ■

Bosch commercial boiler GB162 in cascade installation.

Heat Merchants Customer Services

In recent years Heat Merchants has added a range of services which are designed to support customers in their respective businesses. This includes a complete technical design service, project estimation, commissioning, certification, installer training and spare parts sourcing with next day express delivery.

In addition to this, Heat Merchants has just introduced a comprehensive After Sales Service, the purpose of which is to provide installers with a single point of contact for warranty and technical queries across the entire product range, from boilers to heat pumps.

The After Sales Team will answer any queries, offer technical guidance over the phone and provide on-site technical engineering services with the aim of resolving any issues as quickly and efficiently as possible. This minimises disruption to both installers and, in turn, their customers. Pat Smith, National Technical Services Engineer said: "The aim of this support service is to present installers with a one-stop solution for all after sales enquiries".

The Heat Merchants Customer Support Team (right): Mark Walker, Sales Director with Eamonn Grennan, Emer Gaffey, Ray Lynam, Fiona Heavin, Carl Garvin, Margaret Kleve and Pat Smith, National Technical Services Engineer.

Quality System Solutions for large domestic and commercial boiler projects

C&F Quadrant is one of Ireland's leading suppliers of heating and plumbing products with a portfolio of market-leading brands catering for both commercial and domestic applications. With offices in Dublin and Belfast, and a network of regional representatives and merchant trading partners, comprehensive all-Ireland coverage is assured.


C&F Quadant office and warehouse headquarters in Dublin

Complementing and supporting the extensive product portfolio is a team of highly-qualified, engineering-led, personnel. Experience runs to the core of C&F Quadrant with long service commonplace at all levels, from trade counter personnel through to technical support, field sales engineers and back-up administration.

This long-service feature is mirrored in the long-standing trading relationships it enjoys with many of its suppliers, some of which date back 20, 30 and even 40 years. Those currently in the portfolio are ACV, Bosch, Coster, Flamefast, Unical and Vaillant.

Boilers from all brands represented are listed on the SEAI Triple E Product Register and qualify for the Accelerated Capital Allowance Scheme.

Brief details of all are as follows.

COSTER Included in the C&F Quadrant portfolio is the Coster range of energy control products that offers solutions for the automation, control and management of heating and air conditioning sites.

The Coster product mix covers:

- Automation of boilers and burners;
- Heating;
- Thermostatic mixing valves;
- Air conditioning;
- Gas safety/alarm systems;
- Valves/actuators;
- Controllers and instruments for various uses;
- Energy metering and allocation of charges.

flamefast Flamefast gas sensors are suitable for use with a wide range of gases and applications. They can be interfaced with a Flamefast GasGuard System or Building Management System using its digital and analogue outputs, as well as being able to connect into much larger systems with a multi-channel controller.

This high-specification and cost-effective gas detection solution offers complete protection from gas leaks and is ideally suited for both industrial and commercial applications.

C&F QUADRANT
CREATING A QUALITY ENVIRONMENT

Dublin: +353 (1) 630 5757
Belfast: +44 (28) 90 36 55 55

Email: sales@cfquadrant.ie

Excellent products supplied and supported by C&F Quadrant

Prestige wall hung boilers from ACV comprise an extended range of four models, in sizes 50kW, 75kW, 100kW and 120kW, and incorporating ACV's unique, self-cleaning stainless steel heat exchanger.

Prestige boilers can be installed in a cascade from two to eight units with a maximum combined output of 920kW. A cascade installation greatly improves the system efficiency and fuel usage, resulting in reduced running costs and lower emissions. There is also an integrated non-return flue valve to make fluing options easier.

Installation and maintenance is simple as all parts are serviceable from the front of the unit, while the ACVMAX® system control also has an easy menu structure.

Bosch has specialised in commercial and industrial boiler construction for 150 years, using innovation, quality and performance efficiencies to establish industry benchmarks others have sought to emulate. Bosch commercial boilers have a very strong presence in Ireland, thanks largely to its long-standing partnership with C&F Quadrant, who have been distributing and supporting the brand for 40 years.

Today's Bosch portfolio includes energy-efficient cast iron boilers, and stainless steel and condensing boilers for commercial heating solutions. A typical example is the Buderus GE range which can achieve up to 92% NCV with low-flue gas temperatures and effective all-round thermal insulation. Easy to install and maintain, the cast iron boiler sections can be transported and supplied separately for assembly in the plant room.

The Unical rModulex EXT enbloc modulating boiler has flexibility as its key advantage and comprises 12 gas condensing models with outputs from 100kW to 900kW. With a cascade installation, the boiler output capacity can be widened to over the 900kW range.

Modulex EXT delivers a certified efficiency up to 109% at the minimum modulated capacity. Seasonal efficiency is +30% when compared with conventional boilers, while the inimitable modulation ratio is up to 1:40. There is also a modulating pump directly managed by the boiler to ensure the maximum condensation at all regimes.

These levels of output are matched by simple installation. Not only is outdoor installation possible with a protection degree of IPX5D, but the compact and light construction makes it easier to manoeuvre.

Lightweight for its class and with a compact design, the Vaillant ecoTEC wall hung boiler can be sited almost anywhere. This versatile condensing boiler includes a comprehensive range of flues, fittings and accessories, and is available in five output ranges – 46kW, 65kW, 80kW, 100kW and 120kW. It is fully compatible with Vaillant's range of intelligent eBUS controls and has flue lengths up to 24m concentric.

www.cfquadrant.ie

Stainless steel only option for Eurofluid

Today, commercial heating system design demands the most reliable, energy efficient components incorporating the latest cutting-edge technology. Heating and hot water technologies should work in harmony to ensure the smooth operation and optimum performance of the entire system. Everything from boilers, CHP's, controls, pumps, water boosting systems, calorifiers, thermal stores, pressurisation systems and conditioning systems should all work in synergy to deliver the highest operational reliability.

The Adisa heating series from Eurofluid Handling Systems.

Against this background Eurofluid has built its reputation on quality products and systems manufactured from quality materials, and especially boiler heat exchangers made from stainless steel, not aluminium. "A key component in specifying the right boiler is the heat exchanger within the boiler, as maintenance costs, durability and product lifetime should all be considered", says Stephen Costelloe, Director, Eurofluid Handling Systems. "Although aluminium is cheaper to manufacture, Eurofluid's boiler range – with stainless steel heat exchangers – has never been more affordable, with very little or no price difference. That is why we supply only the highest-quality brands such as ACV Prestige wall hung and Adisa ADI CD floor standing condensing boiler ranges.

"We have examined the differences between stainless steel and aluminium to offer a comparison of quality and longevity. Our findings are as follows:"

pH levels

Boilers with stainless steel heat exchangers provide a higher resistance to corrosion in a wider range of pH levels than aluminium heat exchangers, therefore increasing the useful life of the boiler. Aluminium will corrode if the proper fluids are not used to produce and maintain a narrow pH range.

Thermal conductivity

Aluminium is a better conductor of heat per unit area than stainless steel but corrosion is at a minimum with stainless steel. So, in practice, the difference in heat transfer would be insignificant and negated, as fouling on aluminium would decrease its transfer characteristics significantly.

Corrosion

Depending on the heating system design, and especially if the boiler needs to run at a high flow rate, aluminium can erode while stainless steel heat exchangers operate very effectively at high flow rates.

Maintenance

Annual maintenance is required for aluminium exchangers to monitor the fluids and to clean the heat exchanger to remove aluminium oxides that can build up and clog the condensate line. Stainless steel heat exchangers are much cleaner internally, with none of the oxide corrosion produced by aluminium.

Strength

Aluminium, being a lighter material, is not as robust as stainless steel and becomes soft at higher temperatures. Due to the strength and durability of stainless steel, there is not the same risk of damage or failure if regular maintenance does not occur on schedule.

Contact: Stephen Costelloe, Director, Eurofluid Handling Systems.
Tel: 01 – 460 0352;
email: info@euro-fluid.com;
www.euro-fluid.com

Vokera makes commercial sense

The commercial market covers a wide range of applications including offices, schools, hotels, libraries, gyms and even large domestic properties. Owners and operators of these buildings are looking for an energy efficient heating and hot water system that can keep up with demand.

Vokèra has a wealth of experience in heating solutions for commercial and domestic properties. Established in 1998 and based in Kilkenny, the company is currently delivering heating through its high-quality gas boilers to over 100,000 houses throughout Ireland.

"We have a strong heritage in providing domestic boilers to the Irish market and have also been installing commercial boilers for almost 10 years," comments Neil Gaffney, Managing Director of Vokèra Ireland. "This history and expertise is backed by the financial strength and stability of our global parent company, Riello Group. At Vokèra, we have always maintained a firm focus on the needs of the Irish market … we are a brand trusted by homeowners, installers, merchants and specifiers alike."

Over the last few years there has been a huge amount of research and development put into commercial boilers, with modern appliances being designed to offer effective hot water and heating delivery, as well as reduced energy consumption. All of Vokèra's commercial boilers have a unique heat exchanger that allows them to modulate down to just 16kW, even if they are positioned in a cascade or modular system. This means a 500kW cascade system can modulate down to 16kW, making it extremely efficient.

As an example, Vokèra recently installed its CondexaPRO boiler in a cascade configuration at a large residential property just outside Dublin. This boiler has been specifically designed for modular systems so it works perfectly in commercial applications or larger domestic properties such as this one. On this particular project three CondexaPRO boilers were installed to ensure the output of the heating system could meet the demand of a larger home.

With energy savings at the forefront of people's minds, Vokèra is working with many building owners to reduce usage and costs, including the Dublin Business School. Here a 43-year-old oil roof-top boiler was replaced with a floor standing modular unit. The installation has provided the school with much-needed energy savings and the building can now be fully up to temperature in just 20 minutes.

Vokera was also involved with a project at Galway Cathedral in Galway City to replace oil boilers with the energy efficient CondexaPRO. The Cathedral had an annual energy spend of over €75,000 but, with the new boilers installed along with new insulation, high efficient glazing and LED lighting, the building is now saving almost 980,000kWh per annum.

Other prestigious jobs Vokèra has worked on include the Law Library in Dublin; Durrow Castle; Calor Gas Filling Plant in Tivoli, Cork and the Glanbia plc office building in Kilkenny. Other projects include various Tesco and Supervalu stores, HSE hospitals in Clonskeagh, Meath and Mullingar, and a number of national schools.

Contact: Neil Gaffney, Managing Director, Vokera Ireland.
Tel: 056 – 775 5055;
email: neil.gaffney@vokera.co.uk;
www.vokera.ie ■

NRGZone – Condexa gas boilers and heat pumps.

Impact of Regulation 1253 on ventilation systems

The European Commission has determined requirements in the Directive 2009/125/EG for the energy consumption of products regarding ecological design. This has resulted in the establishment of Regulation 1253/2014 which imposes requirements for the ecological design of ventilation units. These requirements came into force on 1 January 2016 and will be further defined by 1 January 2018, writes *Mike O'Donoghue, Managing Director, Mark Eire BV.*

Ecodesign

The new Regulation 1253/2014 for ventilation products determines that units for heated rooms with balanced ventilation need to include heat recovery. Earlier, ecodesign already resulted in Energy related Products (ErP) regulations for electrical motors (640/2009) and devices.

The goal of ecodesign is to save more than 4.1 billion GJ of energy. As a result, 233 million tonne of C02 emissions can be saved per year. In comparison, this amount equals what a forest as large as 5.5 times a country like the Netherlands can absorb per year.

This regulation is part of the CE mark and is not applicable to ventilation units for rooms with explosive or toxic air, or air with extreme temperatures.

The regulation is applicable to the following ventilation units:

- Residential units (RVU): ventilation units units with a maximum air flow of more than 250m³/h, or with a maximum air flow of the ventilation unit between 250 and 1000m³/h which, according to the producer, are for residential ventilation;
- Non-residential ventilation units (NRVU): ventilation units with a maximum air flow of the ventilation unit between 250 and 1000m³/h which, according to the producer, are not exclusively intended for residential ventilation. Mark NRVUs – Tanner MDA, Airstream, AHU, Fohn and Calflo;
- Ventilation units (VU): these are electrical devices equipped with at least one impeller, one motor and one cabinet that are intended to replace polluted air with outdoor air in a building or part of a building. Mark VUs – Tanner MDA, Tanner MDC, GC, Airstream, AHU, Fohn and Calflo;
- Unidirectional ventilation units (UVU): ventilation units that produce a flow in only one direction, from indoors to outdoors (exhaust air) or from outdoors to indoors (supply air), where the mechanical produced airflow is compensated by natural air supply or exhaust. Mark UVUs – Tanner MDA, Tanner MDC, GC, Airstream, AHU, Fohn and Calflo;
- Bidirectional ventilation units (BVU): ventilation units that produce a flow from inside to outside and vice versa and that are equipped with both exhaust and supply fans. Mark BVUs – Airstream and AHU.

Mark Eire Airstream unit.

Consequences

From this year onwards balanced ventilation systems for heated room (NRVU's) need to be equipped with heat recovery, like a heat wheel (HW) or a plate heat exchanger (PHE). In case of flows that are strictly separated from each other or flows that physically are not allowed to come together, a twin coil system should be installed.

All fans must be equipped with a multi-speed drive or a variable speed drive. The energy consumption of the fans is limited in relation to the heat recovery efficiency. The HRS must also have a thermal by-pass facility.

The consequences of the new regulation are that:

- Air treatment devices will become larger and will occupy more floor area (10 to 20%);
- Existing systems can hardly be replaced one-to-one anymore, but can still be renovated or adapted;
- Clients must clearly specify what they would like to have;
- The product information provided by the supplier to the customer will be more extensive;
- The supplier should declare through a DOP statement (DOP = Declaration of Performance) what it delivers.

For more information on the practical and technical implications of EU Regulation 1253/2014 contact: Mark Eire. Tel: 026 – 45334; email: sales@markeire.com ■

FREE COOLING with Hitachi Econofresh

The Hitachi Econofresh kit is an intelligent accessory device that is easy to install and provides up to 100% fresh air with the ability to provide "free cooling" through the damper when the outdoor temperature is below the indoor setting temperature. This kit, when used in conjunction with the RPI in the ceiling system, will not only maintain the correct room temperature and provide fresh air, but also natural cooling, thereby increasing energy savings.

Free cooling is usually used in mid/big size installations through rooftop or air handling units but Hitachi claims to be the only brand able to integrate this application into small installations by using the exclusive Econofresh solution.

Econofresh delivers high energy saving for applications with cooling demand in mid-season and winter operation and is especially suited to data centres, telecoms, shops with heavy internal load (lights, electric devices), sport centres, gyms, pubs, discotheque and meeting rooms.

In economiser mode, if free cooling capacity in not enough to reach set temperature, then the damper is closed to a selected minimum opening and the RPI goes into mechanical cooling (compressor "on") for any outdoor temperature.

The award-winning Econofresh range offers the following benefits:

Operation mode
Fresh air cooling during intermediate seasons saves energy. This unit uses an economiser for cooling which takes in fresh air if the outdoor temperature is cooler than the indoor air. No compressor is

Fresh clean air
A fresh air intake system keeps the air in a room clean at all times. The optional CO2 sensor can sense the degree of pollution of the air in the room and automatically control the fresh air flow;

Reduced power input
Utilising free cooling, the combination of the Econofresh and the RPI 5.0FSN2E can reduce the power input required by more than 20% when compared to a standard RPI 5.0FSN2E system;

Standard controller
Econofresh features a hard-wired remote controller with built in 7-day timer (as per RPI-FSN2E In the Ceiling unit);

Control options
Optional simplified hard-wired or infra-red remote controller with 24-hour timer. The unit is compatible with H-LINK II control and CS Net Web controls that integrate with all leading BMS protocols.

Unit dimensions
Height – 254mm;
Width – 1350+59mm;
Depth – 270mm;
Weight – 12.5kg.

Contact: Robin Chandler, Area Sales Manager Ireland, Hitachi Air Conditioning

The Hitachi Econofresh free cooling kit

Soler & Palau acquires Ferrari

The Soler & Palau Ventilation Group has acquired 100% of the shares of the Ferrari Ventilatori Company. The acquisition of Ferrari Ventilatori reinforces the position of Soler & Palau Ventilation Group in the industrial ventilation market, adding complementary products and services to the ones that the group already has at its disposal.

In its 56 years of existence, Ferrari Ventilatori has achieved an excellent reputation based on high-quality products and services. The company, with headquarters in Arzignano (Vicenza), has a turnover of €31 million and employs 180 people.

"We strongly believe that the incorporation of Ferrari Ventilatori into the Soler & Palau Ventilation Group will reinforce its presence, not just across Europe and the rest of the world", says Robert Holmes, Managing Director of Soler & Palau Ventilation Ltd's Irish operation, "but also here in Ireland where we already have a very strong presence.

"It is the perfect complement to the Soler & Palau Ventilation Group, already an established global leader in ventilation systems for residential, commercial, industrial and infrastructure applications. With headquarters based in Barcelona, the Group has a staff of 4400 and has its own presence in 36 countries, including Ireland. There are also 17 manufacturing plants located in 12 countries. Group turnover in 2015 was €570 million.

When serving the needs of the Irish marketplace this gives us an enviable resource from which to devise solutions that deliver performance and optimum energy efficiency."

About Ferrari

F.lli Ferrari Ventilatori Industriali SpA was founded in 1963 in Arzignano, Vicenza by Antonio and Mario Ferrari and has stood out in the market for more than 50 years with a range of technologically-advanced products. In 2006, Ferrari Fan Technology (UK) was established to enhance the sales and presence of the Ferrari name in the UK and Ireland and the recent acquisition strengthens this link.

In-house manufacturing facilities cover an area of 30,000sq m and processes include laser cutting, punching, folding, spinning, welding, painting, testing and assembly. In excess of 35,000 fans are produced at the plant every year.

Ferrari is known for its professionalism in product innovation and product development while the company is also a very active member of the European Ventilation Industry Association (EVIA).




Ferrari product range

The Ferrari range of industrial fans includes direct and belt-driven centrifugal fans, plug-fans, axial fans, blower fans, in-line fans and duct fans.

Ferrari also offers a comprehensive range of commercial and domestic fan products suitable for cooling, heating and ventilation in HVAC and industrial process markets, for clean air and dirty air or particulate. They can be used as blowers, exhaust fans, forced draught fans or induced draught fans.

In addition, Ferrari specialises in ATEX fans for petro-chemical markets (ATEX Certified) where there is an explosion risk. Fans conform to 2014/34/EU (ATEX) and are suitable for Zones 1 and 2 gas and Zones 21 and 22 dust applications

Certification is important across all areas of application and Ferrari has approvals for high-temperature smoke extract fans for both smoke and fume extract applications (EN12101-3 certified). The centrifugal fans are certified as dual-purpose fans (normal running temperautre and 400°C for two hours).

Energy Efficiency

Ferrari uses aerofoil technology in its impeller-blade design to provide high-efficiency fans which absorb lower levels of power and provide quiet running noise levels.

In accordance with the European Commission Regulation 640/2009, all fans supplied with motors of 7.5kW rating or larger have IE-3 type motors that are of high-efficiency class and help to reduce energy consumption. There are IE-3-compliant motors for smaller power ratings (down to 0.75kW as standard) and a choice of IE-2 motors where the user is operating the fan with inverter speed control.

Fans with IE-4-compliant motors can be supplied on request.

27 four-balls play in CIBSE Ireland golf outing

This year's recent CIBSE Ireland annual golf outing was sponsored by Mitsubishi Electric and held in Castlewarden Golf Club, Co Kildare. With 27 four-balls participating, the shotgun start was challenging and credit to all involved for teeing off on time. While raining early in the morning, the sun emerged as if on cue with the weather, and the excellent presentation of the course, making for perfect golfing conditions.

This event is as much about networking and socialising as it is about golf, and the relaxed, fun-filled atmosphere reflects this. That said, competition is fierce and all were eager to win the PJ Doyle Perpetual Trophy, not to mention the fantastic array of prizes presented by main sponsor Mitsubishi Electric.

Thanks also to Edpac who sponsored Longest Drive and Wilo Ireland who sponsored Nearest the Pin, not to mention the many others who sponsored the individual holes throughout the course.

The shotgun start creates the perfect forum and resulted in a capacity 120 people sitting down to dinner for the presentation of prizes.

Results

Overall winner: Team Sisk
Second: Team Heat Merchants
Third: Team CJK Engineering
Longest Drive: James Duff
Nearest the Pin: David Hickey

Nearest the Pin – Sponsor Derek Elton of Wilo with David Hickey and Brian West, CIBSE Chairman.

Overall winners – Team Sisk: Brian West, CIBSE Ireland Chairman with Donal Clavin, Padraig O'Connor, Derek Brogan and Ciaran Moody, General Manager, Mitsubishi Electric. Missing team member is David Corrigan.

Third – Team CJK Engineering: Brian West, CIBSE Ireland Chairman with Aidan Bird, Paul Carberry, Bernard Byrne and David Cassidy.

Second – Team Heat Merchants: Brian West, CIBSE Ireland Chairman with Alan Hogan, Mick O'Shea, John Delaney and Ciaran Moody, General Manager, Mitsubishi Electric. Missing team member is Niall Gaffney.

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wavin
CONNECT TO BETTER

Mitsubishi Electric 35th anniversary golf day

As one of its many celebratory functions being held throughout the year to mark its 35th anniversary in Ireland (see also page ••), Mitsubishi Electric recently hosted a customer golf day at The Heritage in Killenard.

In keeping with the all-inclusive nature of these events, both the Air Conditioning and Factory Automation Divisions were included with 104 golfers participating.

The emphasis on the day was one of fun and social interaction. Both the serious and occasional golfers enjoyed a splendid day on a magnificent course renowned for its unique design. That said, the greens were challenging!

Being a shotgun start all participants were able to sit down together for the meal and presentation of prizes, after which there was more socialising and networking.

Winners were as follows:

Overall winner: Paul Keegan;

Second: Domnick Ward;

Third: Brian Sheehan;

Best Gross: John Reynolds;

Winning Team: Alan Rasmussen, Paul Keegan, Clive Nolan and Clyde Kersuan;

Second Team: Jim Weldon, Derek Nolan, Brian Sheehan and Alan Keyes;

Nearest the Pin: Tim Healy.

Adrian Gubbins, Mitsubishi Electric Factory Automation, in full swing.

Overall winner Paul Keegan with Ciaran Moody, Mitsubishi Electric

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newhousing@gasnetworks.ie

Gas Networks Ireland

Core sponsors RACGS at 'Augusta of Ireland'

The weather for the most recent RACGS outing at Woodenbridge Golf Club – the August of Ireland – was appropriate for the venue and made for perfect playing conditions on what is, nonetheless, a challenging course.

Overall winner Jack Elstead's score of 43pts was exceptional on the day and he headed a field that included one of the season's highest turnouts, a notable and encouraging factor being the number of guests participating.

Core Air Conditioning sponsored the day with Austin McDermott and Steve Wood presenting a wonderful array of prizes.

Results were as follows:

Overall winner: Jack Elstead, 43pts; **Class 1:** Winner: Kevin Roden, 37pts; Second: Declan Walsh, 35pts. **Class 2** Winner: Martin Buggy, 35pts; Second: Billy Qualy, 35pt. **Front 9:** Mark Kiely, 18pts. **Back 9:** Ger Darcy, 17pts. **Longest drive:** Ben Deegan, 35pts. **Nearest the pin:** Mark Kiely.

Daikin Golfer of the Year: Jack Elstead leads on 22pts from Matt Butler and Liam Hoctor, both on 17pts, in the Daikin Golfer of the Year. ■

Austin McDermott, Core AC presents overall winner- Jack Elstead with his prize.

Sponsor Austin McDermott, Core AC with Classs 1 winner Kevin Roden and Joe Warren, RACGS Captain.

Austin McDermott, Core AC with Longest Drive winner Ben Deegan.

Austin McDermott, Core AC with Front Nine winner Mark Kiely.

Austin McDermott, Core AC with Back Nine winner Ger Darcy and Joe Warren, RACGS Captain.

Data centre freecooling solution from Liebert

The new Liebert EFC indirect evaporative freecooling unit combines the capabilities of freecooling and evaporative cooling principles in one single unit. It was specifically designed to select the most appropriate operating mode based on the external environment conditions, leveraging both principles in order to deliver significant energy savings.

Liebert EFC 300

The use of the evaporative cooling, hence using cold external air as a means of cooling, allows freecooling operation to be maximised and compressor-related cooling to be reduced to a minimum, thus optimising operating costs.

The evaporative principle uses air to absorb water that is sprayed through special nozzles onto the heat exchanger. Water evaporation thus removes heat from the air and cools the outside air temperature. Outside air consequently transitions from "dry bulb temperature" to "wet bulb temperature" as shown in Figure 1.

In order to optimise the overall system efficiency, the Liebert EFC has been designed to change its operation mode according to the external environment. When the external air is cold enough to allow freecooling, the unit works in dry operation mode (winter operation mode). When ambient temperatures are higher, external humidity also determines unit capacity and performances as the evaporative effect is directly associated with the external air capacity to absorb water.

When the unit operates in conditions with higher temperature and lower relative humidity (summer operation mode), Liebert EFC works in evaporative (wet) mode. In climates featuring high levels of humidity the unit may thus require the integration of a Direct Expansion (DX) system or the installation of a chilled water (CW) coil (extreme operation mode).

During the cold season (winter operation mode) return air from the data centre is cooled down, leveraging the heat exchange process with external cold air. There is no need to run the evaporative system and the fan speed is controlled by the external air temperature.

During the warm season (summer operation mode) the evaporative system must run in order to saturate the air. This enables the unit to cool the data centre air even with high external air temperatures. By saturating the air, the dry bulb temperature can be reduced.

Control and management of the system is crucial and Liebert EFC offers constant control of the data centre air via its integrated iCOM control logic. This ensures dew point temperature is lower than heat exchanger surface temperature, thus avoiding unrequired dehumidification.

The SmartAisle control logic embedded in the iCOM optimises internal air volumes and temperatures according to specific server needs.

It also allows Liebert EFC to exactly match the servers' airflow needs, ensuring that not even a single watt is wasted in moving or cooling unrequired air.

The user-friendly iCOM control also exploits the management of energy and water at teamwork level. The system collects information from the different units' key parameters and operating modes (dry, wet and DX/CW) while taking into account water and electricity costs. The control predictively calculates and then implements the combination which optimises operating costs.

Contact: Austin McDermot or Steve Wood, Core Air Conditioning. Tel: 01 – 409 8912; austin@coreac.com; steve@coreac.com; www.coreac.com

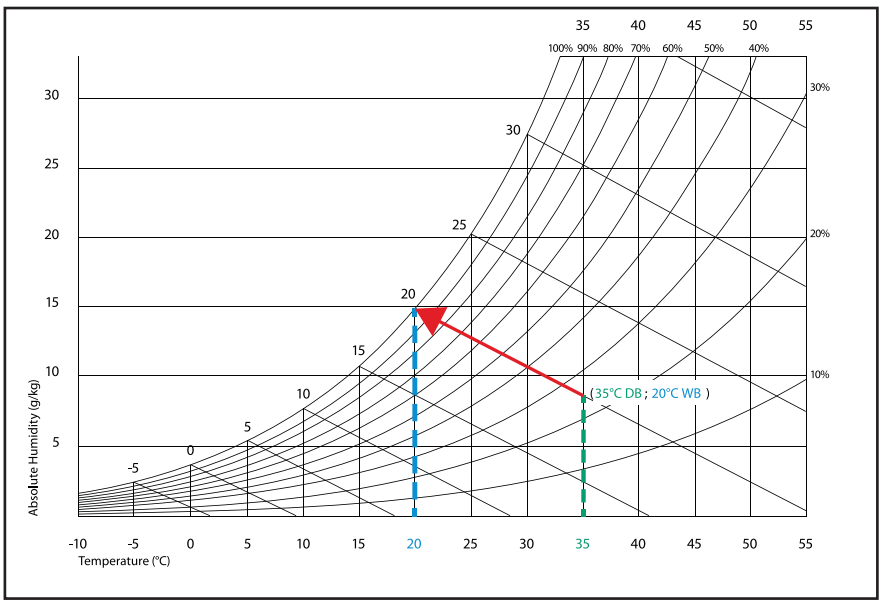

Figure 1 shows the transition from 35°C to 20°C.

Gear up with Wavin's Hep_2O

Installers can win a range of great gear in the latest Hep_2O plumbing and heating promotion from Wavin. Running for 12 weeks, "Gear Up with Hep_2O" gives plumbers the chance to get their hands on a different prize – including DAB site radios, workwear and power tools – each week.

Top: Hep_2O installation from coil. Main pic: Plumber carrying out Hep_2 Acorn installation.

In the final week one lucky installer will also win the "Ultimate Gear Up Bundle" – a €5,000 prize package of top-tech gadgets and gear, as well as all of the weekly spoils – delivered in time for Christmas.

It's easy for installers to be in with a chance of winning … they just need to pick up a ticket at their nearest merchants and register their details online at www.hep2ogearup.ie.

On completing this quick and simple registration, everyone receives a promotional gift with items ranging from mini LED torches to radiator keys and "Gear Up Your Van" packs.

Entrants can then enter up to six unique codes – found on tickets available at merchants across Ireland – each week to maximise their chance of claiming the weekly and big prize draws.

Celine Wogan, Market Manager at Wavin, said: "With the 'Gear Up with Hep_2O' promotion we wanted to give installers the chance to win a wide range of work-related prizes that will help them get through their working days that little bit easier. Prizes range from combi drills and tool boxes to jackets, overalls and trouser sets.

"With the promotion so quick and easy to enter we're encouraging installers across the country to look out for 'Gear Up' tickets at their nearest stockists in the coming weeks and months. The simple entry process means they will be in with a chance of picking up one of the weekly prizes, or the ultimate 'Gear Up Bundle' … a fantastic pre-Christmas present for one lucky plumber".

"Gear Up with Hep_2O" runs from Monday, 12 September to Sunday, 4 December. For more information visit www.hep2ogearup.ie. ■

New MHI Premium and Diamond Series

The new Mitsubishi Heavy Industries (MHI) high-end ZSX Diamond Series and the ZS Premium Series have been engineered to provide significantly-improved comfort and energy savings. In addition to their sophisticated air-conditioning functions and energy-saving performance, both series feature a unique design to seamlessly blend with any interior decor.

The design was created by Milan-based Italian industrial design studio Tensa srl, and responds to a broad spectrum of European design demands due to its rounded contours and stylish design features. To achieve a sophisticated sleek design, computational fluid dynamics (CFD) normally used in designing the shape of jet engine blades were adopted to optimise the layout and air duct shape of both the fan and heat exchanger. This resulted in operating noise of only 19 decibels (dB)(A)1 in "silent" mode for the new units.

The adoption of MHI's twin rotary compressor for the ZSX Series, combined with enhanced vector control enabling optimal control of the compressor motor, delivers greater efficiency throughout the range. As a result, the ZSX model achieves Europe's highest energy rating – EU Energy Label of A+++ – in both cooling and heating mode. Furthermore, all models come standard-equipped with motion sensors that detect the level of ambient human movement and automatically control the room temperature as well as the air-conditioners' On/Off operations.

Both models feature a "silent" operating mode for the outdoor unit and weekly timer function for greater environmental compatibility and convenience. Also, by connecting them to any commercially-available Wi-Fi adapter, operation via smartphones makes the model easy to operate.

Features/benefts

- Stylish European design;
- High seasonal efficiency;
- Low noise level down to 19dB(A);
- Increased max piping length;
- Pre-set operation;
- Improved cool/heat auto changer;

MHI ZS Premium Series

MHI ZSX MHI Diamond Series

- LED brightness adjustment;
- Optional Wi-Fi control via Smartphones, Tablets or a PC;
- Colour variation available.

Brief details of both series are as follows:

ZSX – Diamond Series

- Attractive, well-designed hi-end wall mount known as the Diamond Series model;
- Twin rotary compressor;
- Improved outdoor heat exchanger;
- High COP levels;
- Energy saving control by detecting human presence/activity;
- Unique rounded curves on each side of the unit;
- Suited to any type of environment, whether commercial, residential or industrial.

ZS – Premium Series

- High seasonal efficiency;
- Lower noise levels;
- Optional Wi-Fi control;
- Pre-set operation setting;
- Quiet airflow using 3D Auto to achieve harmonised temperature.

Contact: Diamond Air Conditioning.
Tel: 01 – 636 3131;
Michael Clancy: 086 – 262 0701;
Graham McCann: 087 – 950 9402;
email: info@diamondair.ie;
www.diamondair.ie

BIFM Ireland Region Awards and FM Summit

The British Institute of Facilities Management (BIFM) Ireland Region is on the lookout for top facilities management professionals to enter this year's BIFM Ireland Region Awards, sponsored by Tech Skills Resources. The awards ceremony will take place at BIFM's 20th FM Summit on Friday, 25 November 2016, at Croke Park, Dublin, and will honour FM professionals who have demonstrated excellence in their field.

Recognising facilities management

professionals who have performed exceptionally well in the past year, the BIFM Ireland Region Awards categories include Ireland Region Young FM Professional of the Year and Ireland Region FM Professional of the Year. Winners will receive €500 towards professional development activity of their choosing, courtesy of awards sponsor Tech Skills Resources.

Pat Gaughan, Chair, BIFM Ireland Region said: "We are delighted to announce the return of the BIFM Ireland Region Awards. We always look forward to highlighting the achievements of our committed members and recognising them for their projects and professional excellence."

The awards are open to facilities managers operating in the public, private and voluntary sectors. Last year's winner of the Ireland Region FM Professional of the Year, Trevor Smyth, Campus Facilities Manager at Google Ireland, has a dynamic track record of leading facilities strategies throughout the Republic of Ireland, UK and EMEA. He has a versatile skillset that includes spearheading customer-centric projects and chairing consultative exercises that increase workplace productivity, profitability and cost efficiency.

"I was delighted to win the Ireland Region FM Professional of the Year 2015 Award and I am looking forward to seeing the calibre of entries for this year's awards. Winning the award highlighted many of my professional credentials and demonstrated my commitment to proactively advancing the FM industry."

FM Summit

In addition to hosting the BIFM Ireland Region Awards, the FM Summit, sponsored by OCS and Aramark, is set to provide delegates with a packed programme of innovative talks delivered by specialist speakers, exhibitions demonstrating the latest cutting-edge FM services, and excellent networking opportunities for all levels of FM professionals. Compered by Aoibhinn Ní Shúilleabháin, the summit is firmly established as a highlight in the calendars of FMs operating throughout Ireland as they assemble to celebrate their profession's progression

For details on the awards log on to www.bifmireland.org.uk/awards.

BIFM Ireland Region

The BIFM Ireland Region supports the facilities management community in Ireland with a growing membership across a wide geographic area stretching from the north coasts of Donegal and Antrim to Kerry in the south. It is part of the British Institute of Facilities Management (BIFM), the professional body for facilities management.

Founded in 1993, it promotes excellence in facilities management for the benefit of practitioners, the economy and society. It supports and represents over 17,000 individual and corporate members around the world in over 80 countries.

Contact: FM Ireland. Tel: 01 – 608 7752; www.bifm.org.uk/ireland .

Pat Gaughan, Chair, BIFM Ireland Region with Ann Marie Grealish, Billing Manager, OCS and Des Maguire, Managing Director, Tech Skills Resources.

Samsung brings cassette design full circle!

Having introduced the Samsung CAC 360 cassette to Ireland just a few months ago, it is hardly surprising that GT Phelan has already secured quite a number of projects for this unique product range. As the world's first true circular cassette with an innovative 360° airflow, it has generated a great deal of interest as, apart from the technical features and benefits it delivers, it also makes for very unusual and attractive aesthetics.

This is very much in evidence at one of the most recently-completed and commissioned projects featuring CAC 360, which is a 10,000sq m development on two floors in Sandymount, Co Dublin. Here a total of 36 5kW cassettes have been installed over two floors with the units totally exposed on the ground floor and recessed into the ceiling grid on the upper. The project also features five Samsung VRF outdoor units. All units are locally-wired for control but there is also provision for a Samsung central control in the future.

When Samsung engineers decided to revolutionise existing cooling and heating technology, they looked to other industries for possible solutions. In the end, wind turbines – which enhance airflow efficiency by bringing in a sub-airflow through their blades from the outside into the main airflow – proved to be exactly what they were looking for. To adapt this principle to the 360 Cassette, Samsung added a booster fan, a mechanism that uses pressure to alter the direction of the airflow.

With the booster fan in place, engineers next had to evaluate how to fix some of the more common pain points of conventional 4-way cassette systems, including a way to eliminate direct airflow. So, to ensure a more even airflow, Samsung opted to remove traditional blades altogether.

The final product – a bladeless, circular-mounted cassette equipped with a booster fan – delivers three key objectives. First, there are no cold draughts, but rather a cool and comfortable airflow resembling that of natural wind. Next, airflow is even in both cooling and heating. Finally, the natural curves of the design make it stylishly appropriate for just about any interior.

All units come with a standard 2-year guarantee which can be extended up to five years on splits following a 1-day installer training seminar and up to seven years on VRFs further to a 2-day installer training seminar. These seminars are delivered by Samsung personnel at GT Phelan's purpose-designed training centre in Dublin.

"Some conventional indoor air conditioning systems pose problems for interior design", says Derek Phelan of GT Phelan. "However, as a bladeless, circular system, the 360 Cassette blends in naturally with its surroundings while providing a stunning finishing touch. From a superior modern design to unsurpassed functionality, the 360 Cassette is a powerful solution to a market that has needed revolutionising for quite some time. It really has brought cassette design full circle".

The ceiling-recessed Samsung 360 cassettes on the second floor of the Sandymount project with (inset) the drop-down panel showing ease of access for servicing and four of the five outdoor VRF units.

Contact: Derek Phelan, GT Phelan.
Tel: 01 – 286 4377;
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BTU GOLF NEWS

BTU President's Day at Stackstown

BTU President John Lavelle's outing was held in Stackstown Golf Club recently with Sean Smith and Stephen Keating representing the sponsor, Lynch Interact. As always, this proved a memorable day in the BTU calendar with the excellent turnout competing for a wonderful array of prizes.

Class 3 winner Jim Bollard with BTU Captain Brendan Coghlan.

BTU President John Lavelle with overall winner Brian Harrison and BTU Captain Brendan Coghlan.

Results

Overall winner:
Brian Harrison, 35pts.

Class 1
Winner: Michael Kearney, 33pts;
Second: Ger Hutchinson, 33pts;
Third: Joe Warren, 32pts.

Class 2
Winner: Brendan Bracken, 32pts;
Second: John White, 32pts;
Third: Liam McDermott, 32pts.

Class 3
Winner: Jim Bollard, 30pts;
Second: Vincent Broderick, 29pts;
Third: Des Binley, 23pts.

Front 9: Sean Smith;
Back 9: Mick Matthews.

Sean Smith, Lynch Interact, sponsor on the day, with BTU President John Lavelle.

Class 2 winner Brendan Bracken with BTU Captain Brendan Coghlan.

BTU President John Lavelle with Class 1 winner Michael Kearney.

Grundfos ALPHA3 perfectly in balance

The new Grundfos ALPHA3 redefines what a small domestic circulator can do. Filled with useful features and robust hardware, the circulator raises the bar for efficiency and reliability in domestic circulators, even in the toughest systems.
The ALPHA3 has an EEI of 0.16, the lowest of a domestic circulator and a max power consumption of 26W. The AutoAdapt function allows the pump discover the actual duty point of the heating system leading to reduced power consumption.

When combined with the ALPHA Reader, the ALPHA3 uses a light sensor to read data communication from the pump and sends it to a smart device. The installer then follows some easy steps to hydronically balance the heating system.

This solution means that complex data collection and calculations are done automatically in the GO Balance app. The user only needs to populate the app with simple information such as room size, radiator sizes, and flow and return temperatures. No special tools or specialist training is required to use the system as following the simple instructions is sufficient to balance the heating system.

Utilising data from the pump's electronics, the pump calculates the flow rate of each radiator (one radiator at a time) transmitting this data to the user's phone via the READER, and compares the value with the pre-calculated value, allowing the user adjust the valves to balance the radiators.

The GO Balance app also produces a report detailing the balance of each radiator and the heating load of each room, demonstrating that the process has been correctly completed.

This is a huge improvement on existing market solutions as time and costs are substantially reduced as the ability to read key data remotely benefits installers and homeowners alike. Moreover, a correctly-balanced domestic radiator or underfloor heating system can generate savings ranging from 7% to 20% on the heating bill.

The savings don't end there as, with an energy efficiency index of just 0.15, the Grundfos ALPHA3 is the most energy-efficient circulator in its class. It analyses the pattern of use and automatically adjusts the power output down to as little as 3W when the demand is low, offering an energy saving of 87% compared to regular pumps.

Acknowledging the importance of system balancing, the ALPHA3 received an award in the Best Energy Efficiency category at the SEAI Energy Show held in the RDS earlier this year.

So, welcome to the market's most reliable and durable circulator, with the added benefit of substantial savings on heating bills through quick and easy hydronic balancing … making it as easy as 1-2-ALPHA3.

Contact: Grundfos Ireland. Tel: 01 – 408 9800; email: salesireland@grundfos.com; www.grundfos.ie ■

Grundfos ALPHA3 with ALPHA Reader and mobile.

Limelight … new perspectives

By Sarah Carolan, Architect and Lighting Designer

The Limelight event hosted in DIT Bolton Street earlier this year shone a spotlight on the lighting community in Ireland. Gathering a diverse team of presenters and covering topics ranging from photography through to daylight and eyesight, the event captured various interpretations and opinions on the subject. Here are some brief extracts from the event.

James Duff, lighting designer with Arup, gave an enthusiastic insight into some oversights made when designing glazed buildings. One such building is London's Rafael Vinoly-designed "Walkie-Talkie" tower which was impacting on adjacent buildings and streetscapes. The bright southern sun was being reflected off the curved surface of the tower, beaming it into the streets below, melting car parts, cracking tiles and even frying eggs (Pic 1).

Pic 1: Egg being fried on broken tiles by reflected beams from the "Walkie Talkie" Tower, London.

Anne Gorman, an architect and daylight researcher described daylight in our living spaces and the role that a view may have on our perception of daylight in the interior. She also discussed the latent potential of window orientations other than south, and the use of photography/HDR imaging as a new way of exploring daylight in buildings.

Artist Vauney Strahan, presented her masters work entitled "Lateral", based on her

Pic 2: "Crystal", oil on panel, 45cm x 58cm, 2013, Vauney Strahan.

research into human consciousness and perception. She embraces the idea of spaces within spaces, often generated by reflections and interplays of light, revealing stories and creating atmospheres in space (Pic 2).

Ste Murray works between performance and architectural photography. He explained that there are contrasts as well as similarities between the two, both

Pic 3: Cowshed Project – architectural photography by Ste Murray.

involving patience. In architecture it is the changing sky that discloses the qualities and textures of materials in a different light, as illustrated in a barn and school project that he showed (Pic 3).

Architect Michael Mescal presented his work which aims to create a mutli-disciplinary software programme to enable architects, at concept design stage, to easily test areas such as solar gain, daylight and wind load. Current practice often engages consultants too late in the project to rectify early design faults.

Peter McGuire, stained glass artist, spoke about Ireland's natural resourse of beautiful and constantly-changing skyscape. He refers to his glass works as an engine and he compares light to the fuel which

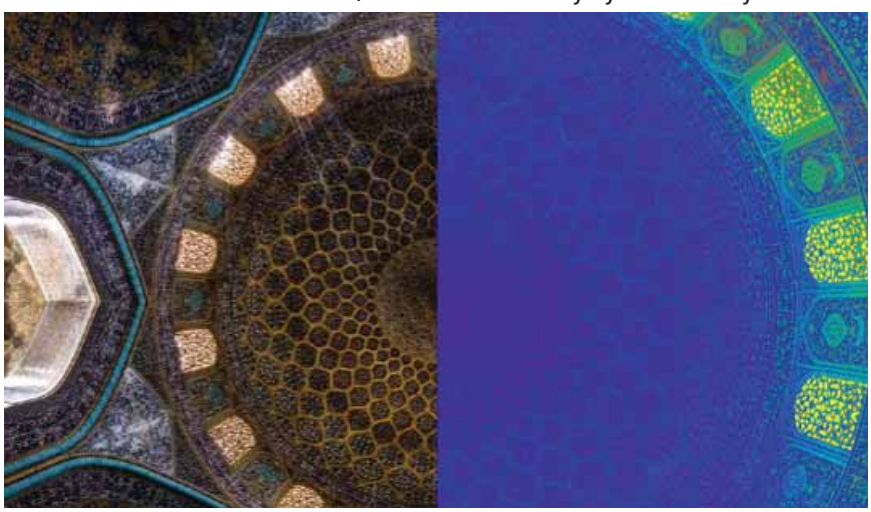
Pic 4: Stained glass project by Peter McGuire catching the changing light.

drives it and makes them beautiful (Pic 4).

Paul Kenny, a lecturer in UCD, spoke about his past and proposed research. He told how James Turrell, the famous light artist, was drawn to Ireland because of its forever-mutating skies. He created his sky garden in Lissard Estate in Cork. His current "Threshold Project" looks at how certain environments allow you to see spectral elements of light you may not see in other environments, and also how these spectral qualities relate to human wellbeing (Pic 5).

Pic 5: The Threshold Project.

Morteza Matkan, an architect and researcher in UCD, demonstrated how he is using HDR imaging to measure brightness levels, arguing that the traditional methods used to measure light are not conducive to well day-lit spaces. Looking for a common language he has used this technique also to measure "sacred light", testing it on the cuppula of Sheikh Lotfollah Mosque, Iran (Pic 6).



Pic 6: HDR modelling of the Sheikh Lotfollah Mosque, Iran.

Conor Malone, an ophthalmology research fellow, gave a humorous medical presentation entitled "Lasers and Leprechauns", the leprechauns being the disordered vision experienced by a person suffering from Charles Bonnet Syndrome.

He illustrated studies of Water Lilies carried out in Monet's early career and in his declining years, contrasting the differences in perception and clarity, between the healthy eye and the eye distorted by cataract development (Pic 7).

Pic 7: Left – The realistic interpretation of Monet's Water Lilies as they were; right – is the real painting he did in old age with cataracts.

Stephen Tierney, architect, addressed the work of Vermeer. Light is used to portray many different qualities in his work and subtle shifts that can often alter the meaning of an element and consequently the message. His research aims to understand how Vermeer used his studio to create these shifts in light, which was possibly achieved through curtains and props, as well as changing weather conditions (Pic 8).

Pic 8: Vermeer used shifts in light in his studio to convey messages in his work.

Conclusion

This Limelight event provided a very interesting and stimulating glance into a myriad of disciplines to which light is of paramount importance. All present came away better informed and more curious, and hoping that there will be further exploration of this topic via a continuation of the Limelight series. ■

back issues

LEAN falling in to jargon trap?

While the whole point of LEAN is to bring clarity to the construction process, I wonder is it now in danger of falling in to the jargon and acronym trap.

Gemba Days, Gemba Tours, a Gemba Walk and Gemba Training are the new LEAN buzzwords emanating from the US. What does Gemba mean? Apparently, it is a Japanese term for workplace or where the work is actually getting done.

LEAN experts now encourage "going to the Gemba" to see how things are really done and to identify where there is opportunity to eliminate or reduce waste.

According to one of the latest bulletins from the LEAN Construction Institute in the States: *Gemba is essential to Lean because it facilitates Continuous Reflection and relates to the principle of "going slow to go fast."*

One acronym is appropriate in this instance – KISS!

Refrigeration Class of '81

With the debate about apprenticeships and skills shortages now very much in the news, it is interesting that a group from the AnCo Refrigeration Class of '81 recently got together to reminisce about times past.

AnCo was then Ireland's national training body and members of the Class of '81 spent a year at its centre in Douglas, Cork, where they learned not just about refrigeration but life itself. Staying in digs, most were constantly hungry as they never got enough to eat, and so used that as an excuse to spend a great deal of time in a local pub where they could avail of the free cocktail sausages on offer.

All were employed by the then industry leaders and many are still working within the sector in various roles. Back Issues caught up with some as they gathered for an evening of chat and craic in Dublin recently and the plan is to meet up regularly going forward. Indeed, John Lambert, who was part of the Class of '81 and has spent the last 30 years working in the US, has asked them to convene a meeting for when his is home next month.

Any others from the Class of '81 who would like to attend should contact Vincent Mahony at 087 – 969 4221; email vincent.mahony@eu.panasonic.com

Who said nostalgia ain't what it used to be?

Vincent Mahony, Panasonic with Barry Rooney, Dell Computers, Martin Baneham, Burlington Engineering, Richard English, RECool and Jim Ffrench, DIT.

Journey across three centuries

What has the Jones Engineering Group got in common with The Bugle Babes, The Booka Brass Band, Loah, The West Ocean String Quartet, Professor Diramuid Ferriter, Eimear Quinn, Declan O'Rourke and John Sheehan of Dubliners fame?

The answer is that they all performed at a ceremony held in the Dining Hall at Trinity College recently to mark the publication of a specially-commissioned book by Clara Cullen to mark the 125th anniversary of the Group.

It was a truly unique presentation that was clever, slick, entertaining and informative. *Building Services News* will have a full report in the next edition.

Master of ceremonies was Philip King with Jones Engineering Group CEO Jim Curley formally announcing the book launch before the entire performing ensemble rounded off the evening with a stirring rendition of Here's a Health to the Company.

Panasonic

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